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ABSTRACT

The incidence of retardation and of hearing loss among the retarded is considered and the problem posed by the aurally handicapped who may be misdiagnosed as retarded is examined. The historical background of past and existing education for the retarded deaf is presented. A study was begun in early 1970 which concerned services for and incidence of deaf retardates among the state's estimated 29,000 institutionalized retarded. Based on samples of educable and trainable persons aged 6 to 30 in two state schools, what was felt to be a minimum percent of .07 was determined to be the number who had hearing losses. No existing programs within schools for the retarded or for the deaf were adequately serving these people. These findings provided the rationale and need for the tentative proposal for a New York State Program which is described and includes site of the program facility, classes, living arrangements, vocational training and placement, and evaluation. Records, forms, and tables are appended. (RJ)

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# COMPREHENSIVE PROGRAMMING

# FOR THE DEAF-RETARDED

# WITHIN NEW YORK STATE:

## A SURVEY AND PROPOSAL

EC 032 886

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February, 1971

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## INTRODUCTION

This proposal is an outgrowth of a study conducted by the New York State Temporary Commission to Study the Problems of the Deaf. This study concerned itself with defining the deaf retarded population, its incidence within the institutionalized retarded population, existing programs and services, resultant needs, and methods and suggested programs to meet these needs. The data collected from this study resulted in a number of meetings with state education, mental health, and rehabilitation personnel. The positive responses presented at these meetings resulted in the decision by the Commission to draft this preliminary proposal for consideration by the appropriate agencies and interested parties.

### The Population

Within the United States, there exists approximately 290,000 institutionalized retarded. This figure represents only those who are committed to private and public institutions and does not include the large number who may clinically be judged retarded but are situated otherwise. Within New York State, the number of institutionalized retarded is approximately 29,000, a figure which represents 10% of the total institutionalized retarded population in the United States. The percentage of these 29,000 patients who may functionally be regarded as deaf has to date not been accurately determined. Should it be shown that

the functionally deaf (to be defined) represent a meaningful percentage of the above 29,000 patients, and that existing programs fail to take into full consideration their multiple handicaps, then it may be that New York State is failing to provide for their needs on an educational, habilitative, and humanitarian level. As the physical fact of deafness, in itself, poses formidable educational and communicative barriers, failure to provide specialized programs for the retarded deaf must result in a higher incidence of retarded deaf remaining permanently institutionalized than would be the case were special programs available. The validity of this statement will be covered and supported in the section dealing with Past and Existing Programs. Thus, assuming the above conditions to be valid, New York State is imposing on itself a larger, self-perpetuating financial burden for the permanent care of these patients than would be the case were specialized programs available, programs the cost of which would be nominal compared to the lifetime custodial cost involved.

## Hearing Loss Among the Retarded

There is a considerable and growing literature relative to the incidence of hearing loss among the retarded. Reported estimates range upward to 57% of the population sampled (Birch & Matthew, 1959; Lloyd & Reid, 1967). Schlanger (1961) reported a prevalence of over 50%. In testing 498 retarded patients, 210 under twenty years of age, and 288 over twenty years of age, Schlanger and Gottsleben (1956) found only four percent with

with normal hearing while thirty-five percent had demonstratable hearing losses. Johnson & Farrell (1954) in testing 270 children at the Fernold School, found that 66 (24%) showed significant hearing losses. This figure is approximately five times as great as prevails among Massachusetts public school children in similar age groups. The severity of the impairment shown by the affected children was also much greater than that of the public school children. It is axiomatic that the hearing loss of many patients goes undetected due to more prominent abnormalities. Such hearing losses should be considered as contributing in some measure to educational and social retardation, particularly among the milder retarded.

Kodman, Siegenthaler and Bradley (1958,1959,1955) all report that hearing loss is common in the institutionalized mentally retarded relative to the general population which shows a prevalence approximately one-fourth as great. These studies also suggest that up to 25% of the mentally retarded show at least mild hearing loss.

Within New York State, an audiometric study was completed by Dr. Nober of Syracuse University on the entire population of the Rome State School (1968). This study, "The Audiometric Assessment of Mentally Retarded Patients" was released in 1968. It is of relevance to note the procedure which was followed. Patients

were group screened at 30 dB (ISO) at frequencies of 500, 1000, 2000, 4000 and 6000 Hz inclusive. A "Pass-Fail" procedure was established based upon a five-point scale. Patients who failed group screening were individually tested as above. The results of a total population of approximately 4,000: 43% of the males and 44% of the females possessed hearing losses.

There is no dearth of further studies to quote; the principle findings are basically similar: that the incidence of hearing loss, ranging from mild to profound, is statistically significantly higher among the retarded than among the normal population. The majority of such studies, however, point up the problem of utilizing the findings contained therein for purposes of programming for the retarded deaf. To cite Dr. Nober's study: the findings of this intensive study provide no clue as to the number of functionally deaf patients. Although 44% of the population of the Rome State School were found to have hearing losses as defined by the procedures used, it is self-evident that 44% of this population cannot be considered sufficiently hearing impaired to warrant special programming.

Audiometric evaluation of the mentally retarded is enormously time consuming, requires highly skilled technicians, and is subject to a high degree of error. To evaluate an entire state population is a research project of major proportions. In view of factors discussed above, the need was but to approach the problem of obtaining an accurate estimate from an entirely new standpoint. It was

decided, after careful consideration of methods and procedures, to approach this problem from a behavioristic standpoint. This procedure, in its basic concept, is direct and uncomplicated. Professional staffs, attendants, nursing personnel and patients were to be approached directly. Professional opinions were to be solicitated as to the condition of the patient's hearing and direct, behavioristic observation was to be made of all patients with suspected functional hearing losses. In terms of the number of patients directly observed and the total population covered, this method was unexpectedly swift: the 4,000 patient population of the Rome State School was surveyed in three days.

The actual studies were considerably more sophisticated than is perhaps conveyed by the above description. Forms and methods of interviewing were developed and the two man team consisted of trained professionals, one a psychologist with clinical training in working with the deaf, the retarded, and the retarded deaf. Following the above phase, the patients' folders were analyzed to obtain supporting data. This method appears to have considerable validity and will be thoroughly discussed in the section which presents the research project in detail.

## DEFINITION OF THE MENTALLY RETARDED DEAF

### Retardation

The mentally retarded are legally so defined by legislation of each state which describes the medical, intellectual, and clinical

conditions prerequisite for admittance or commitment to facilities for the retarded. Commonly used tests of general intelligence have an arbitrary cut-off point of around 84. An individual scoring below this point is not necessarily retarded, but is under consideration for possible retardation. Such tests cannot accurately measure the level of a person's adaptive behavior. Since "it is the deficiency in adaptive behavior, not a sub-average test score, which draws society's attention to an individual and creates a need for social or legal action on his behalf....the official definition of the American Association of Mental Deficiency requires that a suspicion of mental retardation established on the basis of measured intelligence be confirmed by a clinical judgment as to the individual's actual adaptive behavior." (Heber, Rick, 1965).

Diagnosis of the mentally retarded deaf poses special problems, both in the use of intelligence tests and in clinically measuring adaptive behavior. Such will not be discussed in detail, but will be covered briefly enough to offer broad guidelines in defining the mentally retarded deaf. As regards intelligence testing, it can be stated briefly that only performance tests of intelligence should be utilized. Due to the experiential deficiency of the retarded deaf, the more culture-free the instrument, the more accurate will be the resulting estimate of intellectual functioning.

Clinical diagnosis of adaptive behavior of the retarded deaf is based on differential diagnosis. Although the clinician must naturally be experienced in the area of retardation, he must concommitently be experienced in working with the deaf and understand thoroughly the behaviorial, social and educational implications of deafness, per se. Whether or not the deaf individual suspected of retardation possesses any language, and in particular knowledge of manual communication, it is necessary that the clinician willing to assume responsibility for diagnosing such an individual himself be well versed in manual communication. Failing to possess this skill, a trained interpreter of the deaf must be present during the examination.

Due to the enormous language handicap posed by deafness and even mild retardation, many cases have been misdiagnosed as severely or even profoundly retarded, when their actual potential adaptive behavior is near or surpasses normal. The author is familiar with one case who was judged to be severely retarded. Following proper diagnosis and training, the patient obtained a score of 120 PIQ on the WAIS and subsequently was discharged. Vernon (1969) reports the case of a young deaf boy who was judged retarded and spent several years in a California institute. Upon retesting, he obtained normal scores and was transferred to a school for the deaf. He subsequently graduated from Gallaudet College. While such cases may in truth be extreme, they indicate the need for clinicians trained in both retardation and deafness.

Diagnosis based on adaptive behavior is further compounded due to the fact that deaf individuals exhibit a higher number of multiple handicaps. In discussing this problem, Vernon (1969) states: "For example, degrees of brain damage, autism, schizophrenia, asphasia, or visible physical defects are not uncommon. Any of these conditions along with deafness often result in test responses and behavioral patterns which are easily confused with retardation in fact, the basic problem of the differential diagnosis of whether or not any of these conditions are present can be extremely difficult in certain cases. The problem is further compounded because autism, brain damage and aphasia are known to be more common in the deaf population.

From the above remarks, it may be see that diagnosing the retarded deaf relys heavily upon differential diagnosis by clinicians skilled in working with both the deaf and the retarded. Kirk (1962) has expanded upon this concept of potential adaptive behavior, and we recommend that his definitions serve as guidelines, keeping in mind the special and specific conditions arising from deafness:

a. "The Slow-Learning--Those who are not considered mentally retarded because they are capable of achieving a moderate degree of academic success even though at a slower rate than the average child. They are educated in the regular classes without special provisions except an adaptation

of the regular class program to fit slower learning ability. At the adult level they are usually self-supporting, independent and socially adjusted.

b. The Educable Mentally Retarded--Those who, because of slow mental development, are unable to profit to any great degree from the programs of the regular schools, but who have these potentialities for development: (1) minimum educability in reading, writing, spelling, arithmetic, and so forth; (2) capacity for social adjustment to a point where they can get along independently in the community; and (3) minimum occupational adequacy such that they can later support themselves partially or totally at a marginal level. The term "educability" then refers to minimum educability in the academic, social, and occupational areas.

c. The Trainable Mentally Retarded--Those who are so sub-normal in intelligence that they are unable to profit from the program of the classes for educable mentally retarded children, but who have potentialities in three areas: (1) learning self-care in activities such as eating, dressing, undressing, toileting, and sleeping; (2) learning to adjust in the home or neighborhood, though not to the total

community; and (3) learning economic usefulness in the home, a sheltered workshop, or an institution.

d. The Totally Dependent Mentally Retarded--Those who, because of markedly subnormal intelligence, are unable to be trained in self-care, socialization, or economic usefulness, and who need continuing help in taking care of their personal needs. Such children require almost complete supervision throughout their lives since they are unable to survive without help."

Broadly speaking, the conditions which must be met for specifying that an individual is mentally retarded are similar, on the surface, for both the deaf and the hearing. The purpose of the foregoing discussion was to stress the unique conditions resulting from deafness and to point out the nature of the instruments and training prerequisites to proper diagnosis. With this in mind, the guidelines recommended by the AAMD and those specific requirements mandated by New York State are supported.

## Hearing Loss

In the foregoing discussion of a definition of the retarded deaf, nothing has been offered relating to the actual degree of hearing impairment. The great majority of published studies relating to the hard of hearing or deaf retarded deal solely with audiological aspects of the problem. The difficulty in utilizing the results of these studies for purposes of special programming was pointed out earlier.

Audiologically, who should be included in a special program for the retarded deaf? This problem is roughly analagous to a diagnosis of the retarded deaf based on IQ and clinical judgment. IQ, as we have seen, is subject to error and difficult to assess, while clinical judgment, even more difficult, is based on the gestalt, the total life circle and actual and potential functioning of the individual. So it is with the hearing of the individual: both measured hearing and functional (psychological) aspects of this hearing must be considered.

Although it may come as a surprise to the reader, there is no pat, universally accepted definition of functional deafness. In any single case, professional opinions as to the severity of the hearing loss, in a functional sense, may be obtained which will vary in their judgment.

Schools and institutions charged with the responsibility of educating the normal deaf child, i.e., the child in which deafness is the only existing known handicap, have formal, general guidelines which are more or less in agreement. One such which is commonly accepted is as follows: an individual who possesses an average 60 db loss or greater in his better ear across the 500-2,000 Hz range (ISO) may be considered as demonstrating the need for special educational or training programming. There is little difficulty in identifying the normal deaf individual whose loss meets or exceed these standards. With the retarded, there is a greater need for differential diagnosis to determine that responses or lack of responses are due primarily to hearing losses and not other CNS pathology and/or behaviorial patterns.

As severity of hearing loss reaches or falls below the above guidelines, much analytical skill is needed on the part of the examiner to determine the functional severity of the loss. Two general considerations are of importance here. The first of these is technical. The typical audiogram specifies only the db loss across a specified Hz range. Etiology of the loss, speech discrimination scores, locus, and many additional technical consideration play a role in determining whether or not the loss may be considered functional. This cannot be covered further in this paper. Only a qualified audiologist could competently discuss the above considerations. It should be remembered that each case may vary with the individual and would need to be diagnosed individually.

The second consideration is psychological. It may be determined that the individual's loss is such that perhaps with a properly fitted hearing aid, he should be able to function adequately within a total hearing environment. At the time of such diagnosis, however, it may be determined that this individual to date may have <u>functioned</u> as a deaf individual. As an example, at the time of diagnosis, this individual may have spent his school years within a residential school for the deaf and/or may have deaf parents and siblings. His experiential life has been confined to the world of the deaf. Whether the need exists or not for further special programming must take into consideration these factors. Such applies to an even greater degree with the retarded deaf.

The above discussion has attempted to take into consideration basic factors involved in defining the retarded deaf. It is not meant as exhaustive. In defining <u>retardation</u> in the deaf, guidelines similar to those used in defining the non-deaf retarded are supported, with additional consideration being given to psychological and behavioral factors resulting from deafness.

In dealing with the degree of hearing loss as a criteria for inclusion of an individual for special programming, general guidelines were suggested. The need for an analytical approach in determining the individual's functional hearing loss was stressed, including psychological factors and the individuals'

prior overall background.

Combining the above factors involved in defining the retarded deaf, the absolute need for comprehensive differential diagnosis was shown. An excellent paper discussing this approach is Vernon's "Diagnosis, Retardation, and Deafness", (1970).

## HISTORICAL BACKGROUND: PAST AND EXISTING PROGRAMS

### Residential Schools for the Deaf

This section is designed to give a brief overview of past and existing programs for the retarded deaf within the United States. It is not meant to be exhaustive. Although such services exist, there has been no research to date on the number, type, or nature of these programs. To research and catalogue the above is a project, the scope of which is beyong the present proposal. The author believes that the overview which follows is reasonably accurate and comprehensive, but realizes that omissions are inevitable. The purpose of this overview is to give a perspective and a base for building upon the proposed program for New York State.

There are two general types of special services for the retarded deaf, characterized by the setting in which they are provided. The first, and undoubtably the oldest, are special classes provided for the multiply-handicapped (and in a few instances, the retarded alone) within residential schools for the deaf. The second are specialized educational and training programs established within state institutions for the retarded. The latter are relatively recent,

few in number, and vary considerably in the scope of services offered. We shall first cover briefly the general nature and limitations of classes for the retarded within residential schools for the Deaf.

Residential schools for the deaf, with few exceptions, are designed to provide educational and training opportunities for the normal deaf up to approximately 21 years of age. The students enrolled, in the majority of cases, possess only one major handicap, deafness. Due to the etiology of deafness, however, a number of such children will exhibit various other behavioral and learning handicaps. Additionally, due to medical advances which enable the victim of a disease to survive (including prenatal diseases and complications), a greater number of deaf children are found to be multiply handicapped. Thus, within nearly all schools for the deaf will be found special classes in which the multiply handicapped deaf child is placed.

Such classes are generally not designed for a specific learning disability. The child with aphasia, retardation, behavioral problems, or the broadly classified "slow learner", are all placed within such a class. The results, in terms of educational achievement, are not optimal.

Most retarded deaf, found within residential schools, may be classified as mildly retarded. Moderately retarded students are occasionally found. Less often one finds a severely retarded student. The profoundly retarded, to this author's knowledge, do not exist within the residential school setting. The total number of retarded deaf within residential schools for the deaf is infinitesimal compared to the estimated total deaf retarded population. The reasons for such are self-evident. The concept of adaptive behavior precludes adequate programming, as the student within such a setting is expected to conform to the normative behavior of the deaf student with normal intelligence.

While New York State schools for the deaf have no set policy to preclude admittance of a retarded deaf child, neither do they have a policy stating the conditions for admitting such a child. It would appear, in short, that the problem has officially been avoided. Due to the problems of differential diagnosis, mildly retarded deaf children may exist in some number in residential schools, as may a number of moderately retarded deaf students. Should such an individual's measured intelligence and adaptive behavior preclude reasonable educational and behavioral advancement within this setting which would result in his becoming a self-supporting member of society, the probable result would be eventual referral to a state institute for the retarded.

Residential schools, therefore, do provide some services for the mild to moderately retarded deaf. These services are, however, minimal and not designed specifically for the population in question. Anderson, and Stevens (1970) have investigated this problem on a national scale and the reader is referred to their paper for a more exhaustive review of the retarded deaf within residential schools for the deaf.

## State Schools for the Retarded

The Directory of Services for the Deaf In the United States (1970) contains listings of both mental health facilities serving the deaf and special classes for the multiply-handicapped deaf. Unless one is individually acquainted with a specified program, there is no way to determine the extent to which the programs and classes service the retarded deaf. The great majority of those which do offer services to the retarded deaf do so incidentally and confine themselves to the upper range of retarded. The author is familiar with the following programs which will be discussed. They are the only programs known to the author which provide specialized and/or comprehensive educational and social programs for the deaf within a state residential setting. Additional programs may be in planning stages (as is the present proposal) or in progress, but are not reported in the literature.

A note should be made here regarding speech and hearing services within institutes for the retarded. A majority of state institutes provide these services. The personnel staffing these units generally confine themselves to providing speech therapy and audiological measurement on an individual or small group basis. In known cases, the therapist, in attempting to work with the retarded deaf, has utilized the simultaneous method (speech, fingerspelling, and manual communication) in attempts to provide actual learning situations. As laudable as the services and individual efforts are, they do not approach the type of comprehensive programming necessary to achieve the results sought in this proposal. Such services, are, however, considered integral parts of a comprehensive program.

## Classes for the Retarded Deaf

There are two general, overlapping types of special services for the deaf within state institutes for the retarded. The first consists of specialized teachers within an educational and/or training setting. These individuals are trained in both the areas of deafness and retardation. Classes are conducted during regular school hours, with the curriculum and methods designed to meet the needs of the retarded deaf. These classes are conducted in the simultaneous method. A number of such classes are in operation in various states.

California conducts such classes at Sonama, Porterville, and Pacific State Hospital. There are a limited number of similar classes, not reported in the literature and the extent of their programs unknown.

The benefits of these classes are unquestioned. They provide the residents with educational and habilitative opportunities which would not be open to them otherwise. Thus they have the opportunity to function at their actual potential. It is within such classes that the concept of language, a visable, formal means of expressing thoughts and emotions, may be first opened up to these individuals.

Programming of this type has a number of built-in limitations. One is the number of residents who can be considered for inclusion. The age range is by perforce limited. Important auxillary services such as psychological evaluation and therapy, if available, are provided by professionals with a limited working knowledge of the deaf and a limited ability to communicate with same. Prevocational, vocational, and placement services are nonexistent. Most importantly, the structured social and residential environment is missing. When the school day is over, the resident is reabsorbed into large wards and the opportunity for continued training and reinforcement is lost.

## Comprehensive Programs

Two comprehensive programs for the retarded deaf within state institutes for the retarded are presently in existence. These programs are located at the Austin State School (Texas) and the Lapeer State Home and Training School (Michigan). Both programs will be covered, offering, as they do, structured programs and research findings relevant to the present proposal.

## Austin State School Program

The "Redwood Project" at the Austin State School, so-named after the cottage in which the residents of this special program reside, is a reasonably comprehensive program now entering its second year. "Combining elements of communications training, academics, prevocational and vocational/placement services, the "Redwood Project" is geared to serve some forty deaf retarded students ranging in age from 12 to 30 years. The physical structure consists of two academic classrooms, a residential unit for eighteen young men and related institutional training stations and program areas suitable to the project needs. The residential living unit program emphasizes the development of independent living skills with the ultimate goal of preparing the participants for community placement in either half-way house or home placement programs." (Hall and Talkington, 1970).

The methods and procedures by which residents were selected for this program are not reported. Presumably they were drawn from the existing resident population. Determinations were made as to present level of functioning and what would be needed for eventual return to the community. Project residents were evaluated at multi-disciplinary staffings where their needs were weighed against the program services available and an individual program developed for each resident. The actual program aspects were covered in three phases, each emphasizing various priorities for the development of fourteen progressive skill areas (Talkington, 1970).

In Phase I, emphasis was placed on acquiring manual communication skills by both the residents and staff. A book, A Manual Communication System for the Deaf Retarded (1970) was developed and published. Pre-academic and concept formation training was emphasized. Regular auditory training was a part of this phase. Social responsibilities in the cottage area was stressed.

In Phase II, academic skills of reading, writing, and arithmetic were pursued in greater depth. Prevocational and self-care skills were taught. General grooming habits and continued social responsibility were stressed. Supervision was gradually lessened.

In Phase III, the main emphasis was on vocational training and preparation for returning to the community. Various aspects of the first two phases were continued.

Staffing for this program at the beginning included a director, a teacher, two part-time aids, and six attendants in the cottage. Professional supportive services were called upon as needed.

The above is a brief overview of the purposes and structure of the "Redwood Project". The program is new and is expected to grow. In-depth data analysis of the results has not yet been completed. Two immediate results, however, have been observed. The most important is the increased ability of the residents to utilize language. Communication, through manual communication, has increased greatly. Secondly, deviant behavior problems including stealing, runaways, and acting out have decreased significantly.

## Lapeer State School Program

The program at Lapeer began as a four-year project to study habilitation of the deaf retarded. This project was supported in part by Vocational Rehabilitation Grant RD800 S. The Lapeer project was the most thorough, comprehensive study of the deaf retarded attempted to date. The study population consisted of 169 residents, ranging in age from ten to forty.

Length of hospitalization ranged from six months to nearly thirty years.

The project was divided into two main phases; the Assessment phase and the academic and vocational training phase. The following overview of this program will be brief in relation to the data and activities resulting from the program itself. A selected number of exhibits and tables will be referred to, and it is to these exhibits and tables to which the reader should turn for an understanding of the characteristics of the population and the results of the program.

The overall goals of this program may be stated as follows:

1. Provide definitive diagnostic measurements for that group of institutionalized patients who were previously characterized as mentally retarded and deaf or hard-of-hearing.
2. Provide the information essential to the planning of a training program which would include considerations of vocational rehabilitation.
3. Provide measurable results of those training techniques and procedures most productive with specifiable groups of patients.

The assessment phase evaluated the physical, psychological, and educational characteristics of the population. This was necessary in order to develop an appropriate training

program. However, this task was enormously complicated by two factors: 1) the lack of language and communication skills by a large part of the population, and 2) a paucity of valid methods of assessing their abilities and capacities. Existing tests and techniques were not designed or normed for this population and their validity was therefore in doubt. It was necessary, therefore, to develop a number of instruments to accomplish stated objectives.

The following exhibits and tables are presented due to their relevance to, and possible utilization in, the proposed program for New York State. Exhibit 1 presents the Medical-Physical Examination used in screening this population. Exhibits 2, 3, and 4 are examples of the psychological and psychiatric scales developed to measure behavioral and social adjustment.

Table 1 presents the characteristics of this population while Table 2 gives the measured academic achievement. Table 3 lists the number of physical disabilities in addition to presumed mental deficiency and deafness.

Tables 4 through 8 give comprehensive data on hearing and speech characteristics. Tables 9 and 10 present intelligence data by age and sex. Correlation data based on IQ and audiologic data and between other diagnostic measures are presented in Tables 11 and 12.

The considerable amount of data generated from the Assessment phase provided a means for selecting groups of patients from the total sample for intensive academic and vocational training.

Following the Assessment phase, the actual training program was initiated. Space does not permit an adequate description of this program. The reader is referred to the report Programming Habilitation of the Hospitalized Deaf-Retarded (1965). However, the basic framework of this program will be described.

The program, in operation, consisted of four academic classes and a prevocational training class. Males were housed in a separate cottage with appropriately trained attendants. Females, due to the smaller number, were housed in various buildings. The specialized training and supportive services, therefore, extended into all aspects of the residents' life.

A full-time clinical psychologist, experienced in working with the deaf and the retarded, provided on-going psychological evaluation, psychotherapy, and assisted in the general administration of the program. A full-time speech therapist provided auditory training and speech therapy. A work-training teacher provided prevocational instruction. All four academic teachers were experienced in working with the deaf.

Attendants and nurses received on-going in-service training in working with this population. Other professionals were consulted as the need arose.

Three general types of work placement were effected during the program. These were: 1) sheltered workshop (Goodwill Industries), 2) institutional work, and 3) outside work placement. The data collected indicated that the deaf retarded patient, with training appropriate to his basic abilities, is capable of functioning in one of these three areas. Table 13 presents data on intellectural functioning and aptitude as they relate to eventual placement in one of these programs. Objective data and observations reported by the staff indicate clearly the positive effects of the program on the overall achievement and performance of the subjects involved. The reader is referred to the full report cited earlier for supporting data for this statement.

One serious omission in the structure of the program was the absence of a facility, a half-way house, which would serve as a residence outside of the institution and ease the transition from institute to community living. A number of residents, who otherwise would have qualified for sheltered workshop or community placement, were denied this opportunity due to their special social requirements and the lack of such a facility. A model for such a half-way house exists in Austin,

Texas and will be discussed in the section following the proposal proper.

The Lapeer program demonstrated without question the feasibility of specialized, comprehensive programs for the retarded deaf. The intangible human benefits can be measured only in small part by changes in performance and work placement. The economic benefits to the state in terms of resident discharge versus life-time custodial care have been documented. The experience gathered and the data made available from the operation of the foregoing special classes and programs will serve as a base for developing and presenting the proposal for a comprehensive program for New York State.

## THE COMMISSION STUDY IN NEW YORK STATE

The present proposal grew out of a study undertaken by the New York State Temporary Commission to Study problems of the Deaf. The Commission is charged with investigating areas of concern to the deaf and hard-of-hearing within New York State. In the spring of 1970, the Commission directed its attention to the question of what services were available to the retarded deaf population. As the total institutionalized retarded population was in the area of 29,000, the magnitude of the question and the lack of accessible, accurate information was of considerable concern to the Commission.

During the summer of 1970, the services of a consultant were retained on an open-end basis to survey the problem, develop feasible techniques for obtaining statistically accurate data, obtain such data, and, should the need for such be determined, prepare a proposal for establishing program(s) for the retarded deaf for consideration by the appropriate agencies and interested parties.

It was first determined that, within the 15 state schools for the retarded, there were no existing special programs for the retarded deaf. This statement excludes speech and hearing services and religious instruction of the deaf by clergy whose pastoral calling is in working with the deaf. Considerable consideration was then given to the most optimum procedures for proceeding with the study. In an Interim Report prepared for the

Commission following the actual data collection, the rationale for the procedure followed was explained. As a number of factors which influenced the course of the study have been discussed in detail in prior sections of this report, i.e., audiological assessment techniques, differential diagnosis, and lack of funding for a prolonged, extensive exploratory study, the present section will confine itself to covering the rationale only briefly.

It was determined that there were no existing programs which were adequately serving what was suspected to be a fairly large population, either within schools for the retarded or schools for the deaf. The Commission was fortunate in having knowledge of programs for this population which existed in other states and therefore had some understanding of the structure such a program should take and justification for assuming both the presence of such a population within New York and the lack of program(s) to service the popoulation.

Accepting the nonexistence of specialized programs, the basic problem confronting the Commission was to obtain a representative sampling of the total institutionalized retarded population and determine, in whatever manner decided upon, the percentage of this population which possessed functional hearing losses, as defined earlier in this report. The criteria for the data which would determine the above would need to be such that various agencies and disciplines would be in <u>general</u> agreement as to the validity of an <u>approximate</u> percentage. If the minimum estimate of the

retarded deaf population was deemed sufficient to warrant special programming, a proposal would be prepared accordingly.

On the surface, the most optimum procedure and methodology for determining the above would be to conduct an audiometric assessment of a representative sample of the population. For reasons discussed earlier in this report, such a procedure was not feasible. Firstly, the money, time and manpower were not available. Secondly, the technical problems involved in audiometric assessment of large numbers of retarded are formidable and not always reliable. Thirdly, to provide absolutely reliable data which would identify the retarded deaf, differential diagnosis based on psychological examination would be needed. It was decided, therefore, to adopt a behavioristic approach which would involve direct contact and clinical observation of the population in question. This will be further detailed later in this section.

## The population

It was decided to limit the present study to institutionlized retardates between the ages of 6-30 who were considered trainable or educable. These parameters were arbitrarily chosen, but were based on the following reasoning: (1) the 6-30 age group is an optimum one for training and educational purposes; (2) identification of the deaf retarded below the ages of six is more difficult and subject to greater error; (3) inclusion of patients over 30 years of age would mean in-

clusion of a larger number of patients whose hearing loss is associated with age per se and would result in an inflated estimate of patients who could be expected to profit from special programming.

The choice of trainable and educable categories is self evident. Patients functioning below this level could not be expected to profit from a special program for the retarded deaf. As it is, the term "trainable" is a general term, not medically descriptive. It allowed considerable lasitude as to which patients should be included. This was an important consideration in dealing with the deaf retarded. In this study, an attendant might include a patient whom he considered trainable; the patient's folder might indicate, however, that measured IQ was below 20. Due to possible errors in measurement, such patients are included in this report.

Two schools were selected as representative samples for this program, the Rome State School and the Newark State School. Both were selected for their sizable population and the expectation that the sizes of their populations would enable surveys to be completed within specified time limits. Additionally, the Rome State School possesses extensive professional services and the consultant had had prior contact in evaluating the deaf retarded at the request of the school. It had been planned to add additional schools had the statistical need shown itself. It did not prove necessary and this survey, therefore, represents the trainable and educable populations of these two schools.

The population of the Rome State School at the time of this survey was approximately 3,800 patients. Of this number, it was estimated that 950 were trainable or educable and between the ages of 6 and 30. The population of Newark State School was 2,326. Of this number, 626 were between the ages of 6-30 and were considered trainable or educable.

## Procedure

The behavioral approach to obtaining the data in question was simple in concept. Basically, the method was to identify all patients falling within the age and intelligence (adaptability) criteria. Following this, direct contact was to be made with attendants, teachers, nurses and other professional personnel and question them as to patients they felt should be listed as deaf retarded, as defined earlier in this report. Concurrently, each patient whose name was offered was met individually and clinically observed. A standardized form was developed to record all pertinent data. A sample of this form is given in Exhibit 5.

When all direct interviews and observations were completed, the resulting data were analyzed. With this information, the institute folders of each resident listed as retarded deaf were reviewed to obtain additional objective data relating to measured hearing loss, medical classification, program, and the like.

The resulting data were again analyzed and combined with pertinent comments from the folders and personal observation. The results of these findings are discussed below.

## Results

The statistical results of the study may be found in Tables 14 and 15. Table 14 presents data on the Rome State School. The number of trainable and educable residents between the ages of 6-30 is estimated as 950 out of a total population of approximately 3,800 residents. The administration was asked, prior to the survey, to estimate the number of trainable and educable deaf retarded regardless of age. The number given was 156. The survey found, that out of the total 950 trainable and educable residents between ages 6-30, that 64 met the criteria of being deaf-retarded. This represents 7% of the popoulation in question.

Table 15 presents data on the Newark State School. Out of a total population of 2,326, it was estimated that 626 residents were trainable or educable and between the ages of 6-30. Out of this number, 46 met the criteria of functional hearing loss. This represents 7% of the population in question.

The IQ range of the deaf retarded between ages 6-30 at the Rome School was minus 20 through 85. At Newark, this range was minus 20 through 81.

Exhibits 6 and 7 present detailed data on each of the residents listed in this survey as being deaf retarded, trainable or educable, and between the ages of 6-30. The residents are coded and their names can be made available on request to the proper authorities. The data included in these exhibits is self explanatory.

## Discussion

A notable omission in the above two exhibits is audiological data dealing with type and degree of measured hearing loss. In almost all cases, such data was not available in the resident folders. In discussing this with the personnel involved, it does not seem that such testing has been carried out.

The results of the surveys at the Rome and Newark State Schools are identical. Out of the trainable and educable ages 6-30 population, 7% were found to meet the criteria as deaf retarded. These findings must take into consideration the fact that objective audiological assessment is lacking. But, from the data presented, the weight of evidence leads one to the reasonable conclusion that the figures reported are a reasonably accurate, minimum estimate of the deaf retarded population. Should the age range of the population studied be expanded, the percentage could be expected to increase slightly. The primary purpose of the Commission study was to obtain a minimum estimate of the number of institutionalized deaf retarded who were considered trainable and educable. A breakdown of the total number of

trainable and educable retarded, ages 6-30, is not available to the author at the time of writing. However, projecting the 7% figure to the total retarded population in New York State of 25,765, without regard to age or intelligence, one obtains 1,803 as the number of retarded deaf.

During the period in which the survey was being undertaken, data was obtained from the State Department of Mental Hygiene relative to a resident survey of all 15 state schools. The portion of this study which is of interest to us concerns questions relative to the hearing status of the residents. Attendants were requested to report simply whether a particular resident had normal hearing, was hard-of-hearing, or was totally deaf. Table 16 presents the results of this question. The percentage of residents who were classifed as hard-of-hearing was 5.5 and those classified as totally deaf was 1.6. The combined total was 7.1, which corresponds to the findings of the Commission survey. As a result of the combined findings of the Commission and State surveys, it was felt that the data were sufficient to indicate a real need for specific and specialized programs for the retarded deaf population.

As a further comment on the above data and the statement to the effect that the 7% figure is considered a minimum estimate, Tables 17 and 18 present the results of a survey conducted at two Maryland State Hospitals for the Retarded (Vernon, 1970). The

results of these surveys indicated that 14.5 percent of the population possessed hearing losses, ranging from mild to total deafness.

The behavioral approach, as a reasonably swift method for obtaining an approximate estimate of the number of retarded deaf within a given total retarded population, appears to have some validity, based on the results of the present study. The number of retarded deaf identified and estimated by the present survey appears to be of a sufficient figure to justify special educational and training programs to meet their needs. Accordingly, the following section will present a proposal for establishing a pilot program.

## PROPOSAL FOR A NEW YORK STATE PROGRAM

The sections proceeding what is to be proposed contain the basic rationale and demonstrate the need. Information and data were presented which can serve as general guidelines in developing a program for the retarded deaf within New York State. The following proposal does not represent the recommendations of a consensus of professionals, but of the author of this paper. It is, however, based upon the success of existing programs and supports the thinking and philosophy of professionals engaged and/or acknowledgable in the area of the retarded deaf. It should, therefore, be considered a tentative proposal, presented for discussion and review by the agencies involved in its possible implementation, by superintendents of state schools for the deaf, and by professionals acknowledgable in the field.

In accepting the need for specialized programming for the retarded deaf where none now exists, the first question to consider, assuming a comprehensive program, is the setting in which the specified objectives may best be accomplished. Three possibilities exist: (1) comprehensive program(s) within residential schools for the deaf; (2) comprehensive program(s) within existing state schools for the retarded; (3) a free-standing school, independent of (1) and (2) above, but nevertheless under the supervision of a state agency or agencies.

It is felt that a free-standing school or institute would theoretically best meet the needs of the deaf retarded population. If such were to be established, however, it would evolve out of experience with a smaller, although not necessarily less comprehensive, program. The State Education Department has discussed the possibility of establishing a separate unit for the multiply-handicapped deaf at the Rome State School for the Deaf. Such a unit would not be designed specifically for the retarded and would most likely limit admittance to the mildly retarded. It is felt, therefore, that at the present time, that comprehensive programming for the retarded deaf can be best established and carried out within the structure of an existing state school for the retarded.

<u>It is therefore proposed that the State Department of Mental Hygiene officially adopt a position on the need for comprehensive programming for the institutionalized retarded deaf and that sufficient staff be assigned to investigate and make recommendations on the most optimum ways and means in which such programming may be instituted within the structure of an existing state institute for the retarded.</u>

The sections which follow offer for consideration suggested structures, concepts, and parameters for a comprehensive program. They are neither rigid or exhaustive and are meant to serve as general guidelines.

## The Population

The exact nature of the population to be included in this projected program would vary according to a number of factors. Assuming that appropriate facilities could be obtained, the following parameters are suggested for the original, or pilot, group.

## Size of Program

The number of residents to be included should range from 75-100 for the pilot group. This could be enlarged on as the program developed, but is recommended at this point for the following reasons: 1) In-service training would be needed for most staff involved at the beginning; the larger the resident group, the larger the staff needs. Beyond a certain number, in-service training would become cumbersome and affect the progress of the program itself. 2) The program, being new, would undergo modification during its first year or so. Such can more readily be accomplished with a group of the above size. 3) It is recommended that the original group be limited in age range and IQ. The more adaptable residents should be included first. The limited number meeting the original criteria would by necessity restrict the number available for inclusion. In relation to this, consideration should be given to retarded students enrolled in state schools for the deaf whose superintendents felt could benefit by inclusion in this program.

Age Range

Residents to be included in the educational and training aspects of the program should range from six to approximately 40 years of age. It is not felt that an arbitrary cut-off point for schooling should be established. However, it is expected that the older residents would be more involved in work training and placement than in an academic setting.

Sex

Hopefully, it would be possible to arrange comprehensive programming for both males and females. It is known that the number of deaf retarded females is lower than deaf retarded males. Should the population pool which would be drawn on prove sufficiently large, this objective should be kept in mind and a balance achieved. The primary objective here is to have a sufficiently large enough number of both males and females so that separate, self-contained residences could be established.

Intelligence - Adaptability Level

The range of intelligence proposed for the original program is difficult to postulate due to factors which were discussed earlier. Measured intelligence, prior to thorough evaluation and training, may or may not be indicative of the actual level of functioning. Obtaining such measures presupposes the use

of appropriate nonverbal instruments administered by personnel with prior training with the deaf retarded. Differential diagnosis should be the procedure by which the residents' level of functioning and adaptive behavior is determined for inclusion.

For the original program, it is deemed desirable to select those residents who possess the highest actual and/or potential intelligence and the highest level of adaptive or coping behavior. This level would be extended downward as necessary to obtain the desired number of residents. It is not possible, therefore, to determine in advance the actual IQ-adaptability level of the residents who would comprise the original group. There would, based on the experience of prior programs, most likely be three or four general levels of functioning involved. As selection reached the lower levels of functioning, the process should retain a degree of flexibility. There would be basic criteria, however, below which a resident would be excluded(for the original group). Basic self care habits (the degree dependent on age) would be necessary.

Criteria would need to be developed for both evaluating and selecting residents who possessed additional multiple handicaps and demonstrated emotional disorders. Generally, the staff structure and services should be such that only the most extreme and/or handicapping conditions would warrant exclusion.

## Site Choice

The author is not familiar with the size, structure, and facilities of all 15 state schools for the retarded. Of those with which the author is familiar, the Rome State School appears to be the most ideally suited for development of this program. The administration of the RSS has expressed an interest in developing programs for the retarded deaf for some time. They were most helpful in the development of the present proposal. Present facilities, projected development of future facilities, and their concept of programming for specialized groups lends itself favorably to a program of this type. Supportive professional services are comprehensive. The Rome State School for the Deaf is located in close proximity and may be able to provide certain professional services and could serve as an incentive in attracting professional staff to this area. Should the proposed program draw upon the deaf retarded population in existing state schools, the centralized location of the Rome State School is well suited to this purpose.

## Assessment

Techniques and measures of assessment have been covered earlier in this report. Examples of specialized rating scales for the population are contained in the Appendix. A few general comments are in order. Measures of intelligence, academic

achievement, and personality should be obtained. Medical and audiological evaluation should be completed. Care should be exercised, however, not to prolong the assessment phase or attempt to obtain data superfluous to the actual implementation of the program. Assessment and evaluation are continuous processes and can and should be refined upon throughout the course of the program and not prior to its actual implementation. We will not attempt to list or cover the actual instruments and methods to achieve this. Such has partially been discussed and listed previously. The approach to assessment should be multidisciplinary, involving consultants from both the fields of deafness and retardation and from the disciplines of medicine, psychology, education, and vocational training.

## General Program Structure

The discussion which follows covers the major components of the proposed program which are considered essential to its optimum success. They are covered briefly and broadly and the objective is to show how each is essential and fits into the total program.

### Classes

The education(i.e., pre-vocational) program should focus on training in communication, reading, arithmetic, and shop or homemaking skills. With younger and/or lower functioning

residents, the thrust would be in acquiring very basic concepts, language skills, and the development of improved personal care skills. At this level and, to a lesser degree, at higher levels, such must be taught through the manipulation of material objects and through a program of behavioral reinforcement. Classes should be as homogenous as possible. Teachers should not rotate, but should teach one level of class(es). Prior experience with the retarded deaf has indicated that maximum class size should not exceed eight to ten students.

Residence Living

Absolutely essential to the success of the program are separate, "self contained" residences for both males and females. This would result in placing together residents varying considerably in age, adaptability, and emotional stability. It is realized that such may not be viewed as the most optimum programming. The advantages inherent in this, however, by far outweigh any disadvantages. Domiciled in such a setting with trained attendants, the interaction and programs possible which would enrich the impact of education and other services greatly increase the growth and social development of the residents. It enables the existence of an entire living experience which can reinforce their socialization and communication skills. In implementing the proposed program, the above must be allowed for and arranged.

Counseling-evaluation-psychotherapy

These services are essential to both the direction of the program and the welfare of the residents. The Lapeer program demonstrated this need from the development of the assessment phase through the actual operation of the program. The residents involved profited from the counseling, play therapy, and individual and group therapy provided. In-service training of both professional staff and attendants was provided by the psychologist involved. The nature of the program, with its requirements for behavior modification, knowledge of the psychology of deafness, and understanding of the medical and psychological aspects of retardation require that services in this area be given primary consideration.

Vocational Training and Placement

The ultimate objectives of the proposed program are either the return of the individual to the community, in terms of sheltered placement or independent living, or optimum adjustment and utilization of skills within the institute. In either case, successful attainment of these goals results in a decreased financial burden to the state and, far more importantly, to humanization and the attainment of a degree of human dignity by the individual.

Outside of academic and basic shop courses available to the residents, a work-training program should be considered

integral. This program would have two major objectives: 1) it would provide the needed training in basic work habits and skills and it would offer, within the institute, actual work for pay made available by outside industry on a piecemeal basis. Ultimately, two types of residents would be involved in this program: those who were acquiring skills and might return to the community, and those who could perform the functions involved but must remain within the residential setting.

Work Placement

Those residents who attain the necessary skills and levels of adaptability may be expected to enter into one of four types of work placement. These are: 1) institutional work assignments; 2) sheltered workshops outside the institute with either residential or half-way house living following working hours; 3) general community work placement with residence in a half-way house, and 4) complete, independent community placement.

A program such as the one proposed may combine all of the above suggested components, yet, if it fails to provide for a transitation between the institute and the community, it is doomed to limited success. With the retarded deaf and the resulting communication and experiental barriers, this is especially true. For the success of this program, there is an absolute need for the establishment of a "half-way"

house within the community. In the development of this proposed program, consideration should be given to the ways and means by which this could be accomplished. Such a home need not be a part of the program per se, but could be established by other agencies and independent, volunteer organizations. The Vaughn House in Austin, Texas is the only known such facility for the retarded deaf. It should serve as a model.

Such is the proposed general structure of the program. Staff needs have not been detailed specifically, but should be apparent from a reading of the whole report. They would depend on the actual program agreed upon, but will be outlined briefly. The minimal staff for a project of this scope should include a director with the prerequisite broad background, preferably in psychology and experienced with the deaf and retarded; special education teachers experienced with the deaf and preferably with the retarded; a speech and hearing therapist; a work training and placement specialist for both the institute workshop and community placement; a psychologist to conduct evaluation and therapy; personnel to staff a half-way house; necessary attendants to staff residence halls; and additional staff as proves necessary. Medical, psychiatric, and other services within the institute would be called upon as needed.

It seems well to end this proposal with several general observations made by the staff of the Lapeer project at the completion of the formal study.

## General Observations

(1) It is well to formulate a program of this kind precisely in terms of its particular goals in direct relation to the types of patients to be included. Following this, the limiting conditions under which these goals can be achieved should be carefully studied and it should be determined which of these exist or can be established in the institution setting. When a realistic compromise between required and available conditions has been achieved and goals redefined in terms of this compromise, the actual mechanisms for goal achievement with the patients can be specified. The larger this list of mechanisms, the greater the likelihood of program success because not only the setting but also experience with the patients will dictate changes in particular mechanisms initially selected.

(2) Specialists who serve as consultants are useful extensions of the project staff but the staff, not the consultants, should determine the program goals and this delineation of function should be made both explicit and specific. Staff must evaluate consultants' suggestions in the context of the total institution program as well as the particular program. While this appears to be a gratuitous statement, in practice, in part because of problems of obtaining full-time staff, it is remarkably easy to let the planning fall into the province of the "experts" with a consequent loss of direction at the program level.

(3) Careful study of legal requirements related to job placement and payment for service should accompany program planning since they directly influence the conditions under which vocational training and placement can be carried out. In fact, failure to resolve these seemingly minor problems in advance can defeat the ultimate purpose of the program.

(4) Advance reading of the literature and employment of knowledgeable staff with experience not only in the substantive area of the deaf and retarded but also in institutional settings are all obvious but sometimes ignored rules.

(5) Use of sign language is very important to the success of a program and at least those persons who are to conduct the formal education including the communication training should have this ability. Other staff members working with the patients should be taught signing at the outset.

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# A P P E N D I X

Exhibit 1

MEDICAL-PHYSICAL EXAMINATION
(Deaf-Retarded Project)

Patient's Name_____ Date_____ Case Number_____
(Last) (First) (Middle) (Year) (Month) (Day)

Hospital_____ Examining Physician_____

A. General:

Height_____ Weight_____
(Feet) (Inches) (Pounds)

Sex Male ( ) Female ( ) Color_____
(White, Negro, Other)

| B. Skin: | None | Mild | Moderate | Severe | Remarks: |
|---|---|---|---|---|---|
| Eruptions | ___ | ___ | _____ | _____ | |
| Pigmentations | ___ | ___ | _____ | _____ | |
| Scars | ___ | ___ | _____ | _____ | |

| C. Skeletal System: | None | Mild | Moderate | Severe | Remarks: |
|---|---|---|---|---|---|
| Axis Deformity | ___ | ___ | _____ | _____ | |
| Scoliosis | ___ | ___ | _____ | _____ | |
| Lordosis | ___ | ___ | _____ | _____ | |
| Pain | ___ | ___ | _____ | _____ | |
| Limitation Of Movement | ___ | ___ | _____ | _____ | |

| D. Extremities: | None | Mild | Moderate | Severe | Remarks: |
|---|---|---|---|---|---|
| Deformity | ___ | ___ | _____ | _____ | |
| Limitation Of Movement | ___ | ___ | _____ | _____ | |
| Pain | ___ | ___ | _____ | _____ | |

| E. Respiratory System: | Normal | Abnormal | Remarks: |
|---|---|---|---|
| Nose | _____ | _____ | |
| Chest | _____ | _____ | |

| F. Circulatory System: | Normal | Abnormal | Remarks: |
|---|---|---|---|
| Blood Pressure | _____ | _____ | |
| Heart Rate and Regularity | _____ | _____ | |
| Palpation | _____ | _____ | |
| Percussion | _____ | _____ | |
| Auscultation | _____ | _____ | |
| Peripheral | _____ | _____ | |

| G. Digestive System: | Normal | Abnormal | Remarks: |
|---|---|---|---|
| Mouth | _____ | _____ | |
| Pharynx | _____ | _____ | |
| Abdomen and Pelvis | _____ | _____ | |

| H. Genito-Urinary System: | Normal | Abnormal | Remarks: |
|---|---|---|---|
| Male | | | |
| Penis | _____ | _____ | |
| Scrotum and Testes | _____ | _____ | |
| Prostate | _____ | _____ | |
| Female | | | |
| External genitalia | _____ | _____ | |
| Vagina | _____ | _____ | |
| Cervix | _____ | _____ | |
| Uterus | _____ | _____ | |
| Masses (tenderness, mobility) | _____ | _____ | |

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| I. Endocrine Glands: | Normal | Abnormal | Remarks: |
|---|---|---|---|
| Pituitary | ____ | ____ | |
| Thyroid | ____ | ____ | |
| Adrenals | ____ | ____ | |
| Testes-Ovaries | ____ | ____ | |

| J. Cerebrospinal System: | Normal | Abnormal | Remarks: |
|---|---|---|---|
| Motor Function | | | |
| Tone | | | |
| Strength | ____ | ____ | |
| Paralysis | ____ | ____ | |
| Atrophy | ____ | ____ | |
| Abnormal Movement | | | |
| Tremor | ____ | ____ | |
| Athetosis | ____ | ____ | |
| Clonus | ____ | ____ | |
| Other | ____ | ____ | |
| Coordination | | | |
| Finger to Nose | ____ | ____ | |
| Heel to Knee | ____ | ____ | |
| Romberg | ____ | ____ | |
| Other | ____ | ____ | |
| Reflexes | | | |
| Biceps | ____ | ____ | |
| Triceps | ____ | ____ | |
| Radioperiostral | ____ | ____ | |
| Patellar | ____ | ____ | |
| Achilles | ____ | ____ | |
| Abdominal | ____ | ____ | |

| J. Cerebrospinal System: (Continued) | Normal | Abnormal | Remarks: |
|---|---|---|---|
| Reflexes: | | | |
| Cremasteric | ____ | ____ | |
| Plantar (Babinski) | ____ | ____ | |
| Hoffman | ____ | ____ | |
| Clonus | ____ | ____ | |
| Chaddock | ____ | ____ | |
| Oppenheim | ____ | ____ | |
| Rossilino | ____ | ____ | |
| Sensory Function | | | |
| Touch | ____ | ____ | |
| Pain | ____ | ____ | |
| Heat | ____ | ____ | |
| Cranial Nerves | | | |
| I | ____ | ____ | |
| II | ____ | ____ | |
| III | ____ | ____ | |
| IV | ____ | ____ | |
| V | ____ | ____ | |
| VI | ____ | ____ | |
| VII | ____ | ____ | |
| VIII | ____ | ____ | |
| IX | ____ | ____ | |
| X | ____ | ____ | |
| XI | ____ | ____ | |
| XII | ____ | ____ | |



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| Remarks: | K. Chronic Conditions: | None | Mild | Moderate | Severe |
|---|---|---|---|---|---|
| | Asthma | ___ | ___ | _____ | _____ |
| | Allergies | ___ | ___ | _____ | _____ |
| | T.B. | ___ | ___ | _____ | _____ |
| | Chronic Bronchitis | ___ | ___ | _____ | _____ |
| | Sinus Attacks | ___ | ___ | _____ | _____ |
| | Rheumatic Fever | ___ | ___ | _____ | _____ |
| | Hardening of the Arteries | ___ | ___ | _____ | _____ |
| | High blood pressure | ___ | ___ | _____ | _____ |
| | Heart trouble | ___ | ___ | _____ | _____ |
| | Stroke | ___ | ___ | _____ | _____ |
| | Trouble with varicose veins | ___ | ___ | _____ | _____ |
| | Hemorrhoids or piles | ___ | ___ | _____ | _____ |
| | Gallbladder or liver trouble | ___ | ___ | _____ | _____ |
| | Stomach ulcer | ___ | ___ | _____ | _____ |
| | Other chronic stomach trouble | ___ | ___ | _____ | _____ |
| | Kidney stones or other symptoms | ___ | ___ | _____ | _____ |
| | Arthritis or rheumatism | ___ | ___ | _____ | _____ |
| | Prostate trouble | ___ | ___ | _____ | _____ |
| | Diabetes | ___ | ___ | _____ | _____ |
| | Thyroid trouble or goiter | ___ | ___ | _____ | _____ |
| | Convulsive seizures | ___ | ___ | _____ | _____ |
| | Repeated back symptoms | ___ | ___ | _____ | _____ |
| | Tumor or cancer | ___ | ___ | _____ | _____ |
| | Chronic skin trouble | ___ | ___ | _____ | _____ |
| | Hernia or rupture | ___ | ___ | _____ | _____ |

| | K. Chronic Conditions: (Continued) | None | Mild | Moderate | Severe | Remarks: |
|---|---|---|---|---|---|---|
| | Powel Incontinence | ___ | ___ | _____ | _____ | |
| | Bladder Incontinence | ___ | ___ | _____ | _____ | |
| | Other | ___ | ___ | _____ | _____ | |
| | L. Impairments: | None | Mild | Moderate | Severe | Remarks: |
| | Vision, even with glasses | ___ | ___ | _____ | _____ | |
| | Cleft palate | ___ | ___ | _____ | _____ | |
| | Club foot | ___ | ___ | _____ | _____ | |
| | Speech | ___ | ___ | _____ | _____ | |
| | Cerebral palsy | ___ | ___ | _____ | _____ | |
| | Paralysis of any kind | ___ | ___ | _____ | _____ | |
| | Others | ___ | ___ | _____ | _____ | |

| | M. Permanent Stiffness or deformity | Left | Right | Remarks: |
|---|---|---|---|---|
| | Fingers | ___ | ___ | |
| | Hand | ___ | ___ | |
| | Arm | ___ | ___ | |
| | Toes | ___ | ___ | |
| | Foot | ___ | ___ | |
| | Leg | ___ | ___ | |
| | Back | ___ | ___ | |
| | N. Missing: | Left | Right | Remarks: |
| | Fingers | ___ | ___ | |
| | Hand | ___ | ___ | |
| | Arm | ___ | ___ | |
| | Toes | ___ | ___ | |
| | Foot | ___ | ___ | |
| | Leg | ___ | ___ | |

Exhibit 2

PATIENT'S NAME_____ DATE_____ CASE NUMBER_____
(Last) (First) (Middle) (Year) (Month) (Date)

BIRTHDATE_____ SEX Male ( ) Female ( ) AGE_____ HOSPITAL_____
(Year) (Month) (Day) (Years) (Months)

NAME OF TEST_____ AMPLIFICATION USED Yes ( ) No ( ) EXAMINING PSYCHOLOGIST_____
(Last) (First) (Middle)

RATINGS OF PATIENT BEHAVIOR AND ATTITUDES OBSERVED DURING PSYCHOLOGICAL EXAMINATION
(Deaf-Retarded Project)

1. EASE OF ESTABLISHING GENERAL COMMUNICATION

5 Impossible or almost impossible to communicate
4 Very difficult -- communications likely unreliable
3 Difficult -- somewhat unreliable
2 Fairly good -- reasonably reliable
1 Good to very good -- quite reliable

2. EASE OF MAKING TEST DIRECTIONS UNDERSTANDABLE

5 Impossible -- doesn't understand what is required
4 Very difficult -- understands very little
3 Difficult -- understanding somewhat unreliable
2 Fairly good -- reasonably reliable
1 Good to very good -- definitely understands directions

3. RAPPORT

5 Impossible to establish any kind of reliable rapport
4 Very difficult to establish rapport
3 Difficult to establish rapport, but some established
2 Fairly good rapport established
1 Good to very good rapport established

4. WORK HABITS -- PERSISTENCE

5 Very poor or gives up at slightest frustration
4 Quite poor or only little tolerance of frustration
3 Only fair or persistence is variable
2 Fairly good or persists much of the time
1 Very good or persists until asked to stop or until failure becomes quite obvious

5. WORK HABITS -- EFFORT

5 Little or no application even to initial stages of task
4 Quite poor even to initial stages of task
3 Only fair, needs special motivation to apply self, then does
2 Fairly good effort expended in initial stages
1 Very good or definitely good effort

6. INTEREST -- INVOLVEMENT

5 Shows no interest in task
4 Shows very little interest in task
3 Shows moderate interest in task
2 Shows fairly considerable interest in task
1 Shows very high interest in task

7. INTERPERSONAL -- LIKING FOR EXAMINER

5 Very hostile or aloof
4 Fairly hostile or aloof
3 Moderately friendly toward examiner
2 Definitely friendly
1 Easily or quickly friendly

8. INTERPERSONAL -- DEPENDENCE UPON EXAMINER

5 Extremely dependent upon E for support, etc.
4 Markedly dependent
3 Moderately dependent
2 Occasionally dependent, somewhat independent
1 Essentially independent of E for support

9. KINESIS -- GENERAL MOTOR ACTIVITY

E Very markedly hyperkinetic or restless
D Somewhat hyperkinetic
C Stable or fairly stable, motorically
B Somewhat lethargic, sluggish, or stuporous
A Very markedly lethargic, sluggish, or stuporous

10. EMOTIONAL TONE

E Manic or euphoric quality of emotional behavior
D Hypomanic or slightly euphoric
C Stable emotional mood
B Moderately depressed mood
A Very depressed mood

11. QUALIFYING NOTES: (Add any comment to elucidate any of the ratings, when this seems necessary.)

NOTES REGARDING RATINGS:

1. Use a separate rating sheet for each examinee and for each examination.
2. Rate S directly after administration of examination.
3. Compare S against the general population of individuals of S's approximate age, as you would imagine them.
4. Try to rate each trait in terms of specific behavior you have observed during the particular test. Avoid halo effect.
5. Where none of ratings apply, rate on the scale value which best fits the individual, then add any clinical notes to explain the qualifications you would like to express. Do not omit any rating for any individual for any test!

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Exhibit 3

PATIENT'S NAME_____ (Last) (First) (Middle) DATE_____ (Year) (Month) (Day) SEX Male ( ) Female ( ) CASE NUMBER_____

BIRTHDATE_____ (Year) (Month) (Day) AGE_____ (Years) (Months) EXAMINING PSYCHOLOGIST_____ HOSPITAL_____

MICHIGAN PROJECT FOR THE DEAF-RETARDED

SUMMARY RATING SCALE
Based on Total Psychological
Examination Schedule: Tests and Observations

1. DEGREE OF CURRENT INTELLECTUAL IMPAIRMENT
(Check one. This is an estimate and represents the degree to which you believe the highest obtained I.Q. on any of the tests is below the individual's capacity were his emotional or physical handicaps corrected or compensated for. The steps on the scale are defined as follows:
5. Very severe. 26 or more points
4. Severe, 16 to 25 points
3. Moderate, 6 to 15 points
2. Slight, not more than 5 I.Q. points
1. None

2. EASE OF ESTABLISHING GENERAL COMMUNICATION (GENERAL)
5. Impossible or almost impossible
4. Very difficult
3. Moderately difficult
2. Fairly good
1. Good to very good

3. RELIABILITY OF GENERAL COMMUNICATION
5. Varies widely, highly inconsistent
4. Quite inconsistent
3. Moderately inconsistent
2. Slightly inconsistent
1. Quite inconsistent

4. WORK HABITS -- PERSISTENCE
5. Very poor or gives up at slightest frustration
4. Quite poor or only little tolerance of frustration
3. Only fair or persistence is variable
2. Fairly good or persists much of the time
1. Very good or persists until asked to stop or until failure becomes quite obvious

5. INTEREST -- INVOLVEMENT
5. Shows no interest in task
4. Shows very little interest in task
3. Shows moderate interest in task
2. Shows fairly considerable interest in task
1. Shows very high interest in task

6. EMOTIONAL TONE -- DEGREE OF DEPRESSION
5. Very severely depressed
4. Severely depressed
3. Moderately depressed
2. Slightly depressed
1. No depression evident

7. EMOTIONAL TONE -- DEGREE OF EUPHORIA
5. Very marked euphoria
4. Marked euphoria
3. Moderate euphoria
2. Slight euphoria
1. No euphoria present

8. LEVEL OF OVERT ANXIETY
5. Very severe anxiety shown
4. Severe anxiety
3. Moderate anxiety
2. Slight anxiety
1. No anxiety manifest

9. LEVEL OF LATENT ANXIETY
(Inferred from clinical observation)
5. Very severe
4. Severe
3. Moderate
2. Slight
1. None

10. AMOUNT OF OVERT HOSTILITY
5. Very severe hostility manifest
4. Severe hostility
3. Moderate
2. Slight
1. None

11. AMOUNT OF LATENT HOSTILITY
(Inferred from clinical observations)
5. Very severe
4. Severe
3. Moderate
2. Slight
1. None

12. DEGREE OF EMOTIONAL MALADJUSTMENT -- CHRONIC
5. Very severely disturbed
4. Severely disturbed
3. Moderately disturbed
2. Slightly disturbed
1. Good adjustment

13. DEGREE OF EMOTIONAL ADJUSTMENT -- TRANSIENT
5. Very severely disturbed
4. Severely disturbed
3. Moderately disturbed
2. Slightly disturbed
1. Good adjustment

14. MOTOR DEXTERITY
5. Very poor motor control
4. Fairly poor motor control
3. Fair motor control
2. Fairly good motor control
1. Good to very good motor control

15. USE OF LANGUAGE
5. Cannot make self understood in language (verbal)
4. Can get very few ideas communicated
3. Can communicate fairly well in language
2. Can communicate well, only very slight handicap
1. No language handicap discernible

16. LIKEABILITY(How well do you, as the examiner like this individual?)
5. No liking at all; may even dislike him
4. Some small liking for him; but feelings are mixed and negative
3. Neutral; do not dislike or like
2. Definitely like him a little
1. Definitely like him a great deal

17. Estimated level of present development _____ to _____
(Give clinical estimate WITHIN 6 months, if possible, or at least WITHIN 1 year; thus, 6 yrs. 0 mos. to 6 yrs. 6 mos.)

18. Estimated, present I.Q. _____ to _____
(Give estimated I.Q. limits within 10 points, if possible, using units of 5 or 10 in defining these limits; thus, 70 to 80, or 75 to 85.)

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Exhibit 4

PATIENT'S NAME_____ SEX Male ( ) Female ( ) DATE_____ CASE NUMBER_____
(Last) (First) (Middle) (Year) (Month) (Day)

HOSPITAL_____ EXAMINER_____

## PSYCHIATRIC EVALUATION
## (SOCIAL ADJUSTMENT)

| | Aggressive Tendencies | | Schizoid Tendencies |
|---|---|---|---|
| Extremely Maladjusted | 5. Extremely aggressive and antisocial. Acts out strong hostile, antisocial impulses. May be psychopathic and very dangerous. | Extremely Maladjusted | 5. Extremely withdrawn and asocial. Requires constant strict supervision. |
| Severely Maladjusted | 4. Severely aggressive, frequently acting out hostile, antisocial impulses. May be psychopathic. Frequently disobeys social rules or laws. Requires strict supervision and can be or is potentially dangerous to others or self. | Severely Maladjusted | 4. Markedly withdrawn and asocial. Usually requires strict supervision. |
| Moderately Maladjusted | 3. Aggressive, unstable, unpredictable. Sometimes acting out fairly strong hostile impulses, e.g., violent temper tantrums. Possibly psychopathic. Sometimes disobeys social rules or laws. Requires some general supervision with strict supervision during episodes. During outbreaks can be possibly dangerous to others or self. | Moderately Maladjusted | 3. Withdrawn, unstable, unpredictable, and sometimes has periods of withdrawal Requires some general supervision, particularly during periods of withdrawal. |
| Mildly Maladjusted | 2. Aggressive, occasionally acting out hostile, antisocial impulses, e.g., temper tantrums. Occasionally may break social rules or laws, but usually not dangerous. | Mildly Maladjusted | 2. Withdrawn, or occasionally withdrawn, but does not require supervision |
| Somewhat Maladjusted | 1. Adjustment within normal range. Tends to be somewhat aggressive. | Somewhat Maladjusted | 1. Adjustment within normal range. Tends to be somewhat withdrawn. |
| Not Maladjusted | 0. Adjustment within normal range with no apparent difficulty in social adjustment. | Not Maladjusted | 0. Adjustment within normal range with no apparent difficulty in social adjustment. |

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Exhibit 4 (continued)

PATIENT'S NAME _____ SEX Male ( ) Female ( ) DATE _____ CASE NUMBER _____
(Last) (First) (Middle) (Year) (Month) (Day)

HOSPITAL _____ EXAMINER _____

## PSYCHIATRIC EVALUATION
## (TEMPERAMENT)

| | Level of Hyperactivity | | Level of Hypoactivity |
|---|---|---|---|
| Extremely Hyperactive | 5. Extremely hyperactive and unstable. Totally incapable of functioning. | Extremely Hypoactive | 5. Extremely hypoactive. Totally incapable of functioning. |
| Severely Hyperactive | 4. Severely hyperactive. Highly unstable, may have short periods of stability, but usually severely hyperactive. Incapable of concentrated functioning except for very brief periods. | Severely Hypoactive | 4. Severely hypoactive, may have short periods of some activity but usually severely hypoactive. Incapable of functioning except for very brief periods. |
| Moderately Hyperactive | 3. Moderately hyperactive and unstable. May alternate between periods of normal activity and periods of hyperactivity or may generally exhibit moderate degree of hyperactivity. Functioning, particularly on tasks requiring accuracy of concentration, impaired by hyperactivity. | Moderately Hypoactive | 3. Moderately hypoactive. Placid, may alternate between periods of normal activity and periods of hypoactivity or may generally exhibit a moderate degree of hypoactivity. Functioning usually at a very slow pace. |
| Mildly Hyperactive | 2. Mildly hyperactive tending to be somewhat unstable. May show periods of normal activity level with occasional episodes of hyperactivity. Functioning, particularly on tasks requiring accuracy or concentration, somewhat impaired by activity level. | Mildly Hypoactive | 2. Placid, tends to be sluggish. May show periods of normal activity level with occasional episodes of hypoactivity or may generally exhibit a mild degree of hypoactivity and sluggishness. Functioning, particularly on speeded tasks, somewhat impaired. Generally, functioning at a slow pace. |
| Somewhat Hyperactive | 1. Somewhat hyperactive, but within normal range of activity level. No apparent impairment of functioning. | Somewhat Hypoactive | 1. Somewhat hypoactive but with normal range of activity level. No apparent impairment of functioning. |
| Not Hyperactive | 0. Functions within normal range of activity level with no apparent impairment of functioning. | Not Hypoactive | 0. Functions within normal range activity level with no apparent impairment of functioning. |

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Exhibit 4 (continued)

PATIENT'S NAME_____ SEX Male ( ) Female ( ) DATE_____ CASE NUMBER_____
(Last) (First) (Middle) (Year) (Month) (Day)

HOSPITAL_____ EXAMINER_____

PSYCHIATRIC EVALUATION
(EMOTIONAL ADJUSTMENT)

| | Level of Behavioral Disorganization |
|---|---|
| Extremely Disturbed | 5. Psychotic. In general, no contact with reality. Functioning completely impaired. |
| Severely Disturbed | 4. Severe neurotic manifestations. In general, maintains contact with reality, but functioning severely limited. |
| Moderately Disturbed | 3. Some neurotic manifestations. Emotional maladjustment seriously interferes with functioning. Subject to severe disturbance under mild stress. |
| Mildly Disturbed | 2. Some interference with efficient functioning. Some mild neurotic manifestations leading to severe disturbance under moderate to severe stress. |
| Somewhat Disturbed | 1. Emotional adjustment generally within normal range with some disturbance following extreme stress. |
| Not Disturbed | 0. Emotional adjustment generally within normal range. |

| | Level of Depression |
|---|---|
| Extremely Disturbed | 5. Psychotic. In general, no contact with reality. Totally unresponsive and unproductive. Requires constant supervision. |
| Severely Disturbed | 4. Severe neurotic depression. Functioning severely impaired. Marked absence of interest. Contact with reality maintained, but seriously unresponsive and unproductive. Requires constant supervision. |
| Moderately Disturbed | 3. Marked depression. Functioning impaired with occasional show of interest, responsiveness and productivity. Needs general supervision. |
| Mildly Disturbed | 2. Some depression, less marked. May function quite normally except in specific stress situations when need for supervision may be required. |
| Somewhat Disturbed | 1. Functions within normal range except in extremely stressful situations. |
| Not Disturbed | 0. Adjustment and reactivity generally within normal range. |

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Exhibit 4 (continued)

PATIENT'S NAME _____ SEX Male ( ) Female ( ) DATE _____ CASE NUMBER _____
(Last) (First) (Middle) (Year) (Month) (Day)

HOSPITAL _____ EXAMINER _____

PSYCHIATRIC EVALUATION

| Orientation: | Yes | No | Remarks: |
|---|---|---|---|
| Time | ____ | ____ | |
| Place | ____ | ____ | |
| Person | ____ | ____ | |

| Speech Pattern: | Never | Rare | Occasional | Frequent | Constant | Remarks: |
|---|---|---|---|---|---|---|
| Normal | ____ | ____ | ____ | ____ | ____ | |
| Overproductive | ____ | ____ | ____ | ____ | ____ | |
| Underproductive | ____ | ____ | ____ | ____ | ____ | |
| Coherent | ____ | ____ | ____ | ____ | ____ | |
| Incoherent | ____ | ____ | ____ | ____ | ____ | |
| Relevant | ____ | ____ | ____ | ____ | ____ | |
| Irrelevant | ____ | ____ | ____ | ____ | ____ | |
| Spontaneous | ____ | ____ | ____ | ____ | ____ | |
| Forced | ____ | ____ | ____ | ____ | ____ | |

| Motoric Reactivity: | Never | Rare | Occasional | Frequent | Constant | Remarks: |
|---|---|---|---|---|---|---|
| Normal | ____ | ____ | ____ | ____ | ____ | |
| Apathetic | ____ | ____ | ____ | ____ | ____ | |
| Stuperous | ____ | ____ | ____ | ____ | ____ | |
| Overactive | ____ | ____ | ____ | ____ | ____ | |

| Affective Reactivity: | Never | Rare | Occasional | Frequent | Constant | Remarks |
|---|---|---|---|---|---|---|
| Cooperative | ____ | ____ | ____ | ____ | ____ | |
| Demanding | ____ | ____ | ____ | ____ | ____ | |
| Irritable | ____ | ____ | ____ | ____ | ____ | |
| Suspicious | ____ | ____ | ____ | ____ | ____ | |
| Apathetic | ____ | ____ | ____ | ____ | ____ | |
| Disturbed | ____ | ____ | ____ | ____ | ____ | |
| Destructive | ____ | ____ | ____ | ____ | ____ | |
| Assaultive | ____ | ____ | ____ | ____ | ____ | |

| Hallucinations: | Never | Rare | Occasional | Frequent | Constant | Remarks |
|---|---|---|---|---|---|---|
| Auditory | ____ | ____ | ____ | ____ | ____ | |
| Visual | ____ | ____ | ____ | ____ | ____ | |
| Olfactory | ____ | ____ | ____ | ____ | ____ | |
| Tactile | ____ | ____ | ____ | ____ | ____ | |
| Taste | ____ | ____ | ____ | ____ | ____ | |

| Delusions: | Never | Rare | Occasional | Frequent | Constant | Remarks |
|---|---|---|---|---|---|---|
| Spontaneous | ____ | ____ | ____ | ____ | ____ | |
| Elicited | ____ | ____ | ____ | ____ | ____ | |



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Exhibit 4 (continued)

PATIENT'S NAME _____ SEX Male ( ) Female ( ) DATE _____
(Last) (First) (Middle) (Year) (Month) (Day)

CASE NUMBER _____ HOSPITAL _____ EXAMINER _____

PSYCHIATRIC EVALUATION
(PATTERNS OF ADAPTATION)

Current Pattern
Of Adaptation

Characteristic Pattern Of Adaptation

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| | | Never | Rarely | Occasionally | Frequently | Almost Constantly | Constantly | Remarks |
|---|---|---|---|---|---|---|---|---|
| _____ | I. Emotionally well adjusted. | ____ | ____ | _____ | _____ | _____ | _____ | _____ |
| _____ | II. Exhibits adaptive difficulties reflecting transient episodes of emotional maladjustment. | ____ | ____ | _____ | _____ | _____ | _____ | _____ |
| _____ | III. Exhibits adaptive difficulties so severe as to constitute a neurotic reaction. | ____ | ____ | _____ | _____ | _____ | _____ | _____ |
| _____ | IV. Exhibits difficulties in adaptation so severe as to constitute a psychotic reaction. | ____ | ____ | _____ | _____ | _____ | _____ | _____ |

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EXHIBIT 5

INSTITUTE_____DATE_____

PATIENT'S NAME_____

BIRTHDATE_____AGE_____SEX_____

WARD_____NUMBER IN WARD_____

WARD SUPERVISOR_____

PRESENT PROGRAM_____

_____

BEHAVIORAL MANIFESTATIONS_____

_____

_____

REPORTED BY_____

OBJECTIVE DATA_____

_____

_____

REPORTED BY_____

ANECEDOTAL HISTORY_____

_____

_____

REPORTED BY_____

OBSERVATIONS:

A. RESPONSE TO GROSS SOUND_____

_____

B. SPEECH

1. RECEPTIVE_____

_____

2. EXPRESSIVE_____

_____

EXHIBIT 5
(continued)

C. MANUAL COMMUNICATION_____

_____

GENERAL OBSERVATIONS:_____

_____

_____

_____

OBSERVATIONS MADE IN

A. WARD_____

B. SCHOOL_____

C. WORK LOCATION_____

D. OTHER_____

PATIENT'S COMMENTS_____

_____

_____

_____

EVALUATOR'S COMMENTS_____

_____

_____

_____

OTHER_____

_____

_____

EVALUATE FOLDER: YES_____ NO_____

ROME STATE SCHOOL — MALES — EXHIBIT 6

| PATIENT CODE NUMBER | BIRTH-DATE | DATE OF ADMISSION | IQ | MEDICAL CLASSIFICATION | SCHOOLING OR PROGRAM PRIOR TO ADMISSION | PERTINENT COMMENTS FROM FOLDERS AND PERSONAL OBSERVATION |
|---|---|---|---|---|---|---|
| 1 | 1/24/56 | 6/28/63 | 30 | 12,12.1, 33,68 | Home | |
| 2 | 3/19/64 | 9/13/66 | -20 | 78,68 | Home | Blind in right eye. |
| 3 | 3/26/58 | 9/25/63 | 28 | 11,11.2 | Home | No Speech. |
| 4 | 7/21/46 | 8/23/50 | 33 | Post Meningitis Encephalopathy | Home | |
| 5 | 6/24/57 | 10/29/64 | 49 | 89 | Kindergarten, Public School | Defective Speech |
| 6 | 9/28/62 | 9/18/69 | -20 | 314.90 | Home | Deaf. |
| 7 | 7/7/56 | 12/15/56 | 23 | Mongolism | Home | |
| 8 | 11/12/54 | 9/25/62 | 38 | 81,33 | Home | |
| 9 | 1/18/49 | 5/27/64 | 60 | 81,33 | Public School | Limited speech. Hearing Aid. 40db rt., 60db lt. Manual Communication. |
| 10 | 8/17/63 | 3/17/70 | 21 | 313.01 | Home | Impaired hearing and speech. Blind, right eye. |
| 11 | 7/12/65 | 12/3/69 | -20 | 314.13 | Home | Impaired hearing and speech. |
| 12 | 5/3/68 | 6/27/69 | 21 | 313.49 | Foster Home | Blind? |
| 13 | 11/16/59 | 3/18/69 | 64 | 311.05 | Refused Admittance at Rome School for the Deaf | Deaf Mutism. Profound bilateral Sensori Neural Loss. |
| 14 | 3/22/43 | 7/10/56 | 12(?) | Mongolism | Otsego School | Deaf Mutism. Totally deaf. |
| 15 | 7/13/46 | 7/2/64 | 82 | 78,33 | Rome School for the Deaf | Hearing Aid. Communicates manually. |

MALES - continued

ROME STATE SCHOOL

~~EXHIBIT 6~~

| PATIENT CODE NUMBER | BIRTH-DATE | DATE OF ADMISSION | IQ | MEDICAL CLASSIFICATION | SCHOOLING OR PROGRAM PRIOR TO ADMISSION | PERTINENT COMMENTS FROM FOLDERS AND PERSONAL OBSERVATION |
|---|---|---|---|---|---|---|
| 16 | 12/18/44 | 4/9/53 | 53 | Hereditary | Catholic School | Marked hearing defect. |
| 17 | 11/21/54 | 9/26/67 | 51-60 | 25,89,39 (other deaf mutism) | St. Coleman's | Deaf Mute. |
| 18 | 1/26/51 | 4/6/54 | 41 | Undifferentiated | Foster care | Congenital deafness |
| 19 | 12/25/58 | 8/30/67 | 48 | 00,81,33 | Home | Rejected by Rome School for the Deaf. Speech. Hearing Aid. Profound hearing loss. |
| 20 | 11/6/46 | 11/27/58 | 44 | Undifferentiated. | Public School. Washington Mills School for Retarded. | Impaired Hearing. Bilateral Chronic Otitis Media. |
| 21. | 5/29/57 | 7/12/67 | 46 | 00,81 | St. Coleman's | Speech defect. One sibling at Rome School for the Deaf |
| 22 | 8/11/61 | 8/17/65 | 66 | Meningitis 12,12.2 | Home | Does not talk much. Hearing Aid. |
| 23 | 7/22/48 | 10/26/62 | PIQ85 | Familial 81 | Public School | |
| 24 | 5/6/45 | 1/7/53 | 13(?) | Encephalitis | Home | Is deaf. |
| 25 | 9/23/54 | 2/8/63 | 70 | 89 | Public School | Deaf in right ear. |
| 26 | 11/30/52 | 6/11/68 | 61 | 00,81 | Public School, Special Class. | Speech defect. Understands speech Poorly. |
| 27 | 12/8/55 | 8/17/61 | 60 | 33 | Home | Slurs words. |
| 28 | 9/3/55 | 4/28/64 | 73 | 89,33 | Foster Home | Absence of external ears. Bone conduction present. Hearing aid. Prfound hearing loss. |

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ROME STATE SCHOOL — M A L E S - continued — EXHIBIT 6

| PATIENT CODE NUMBER | BIRTH-DATE | DATE OF ADMISSION | IQ | MEDICAL CLASSI-FICATION | SCHOOLING OR PROGRAM PRIOR TO ADMISSION | PERTINENT COMMENTS FROM FOLDERS AND PERSONAL OBSERVATION |
|---|---|---|---|---|---|---|
| 29 | 12/3/63 | 4/25/67 | -20 | 61,61.4, 68,36,44 | Home | Hearing handicapped. |
| 30 | 5/25/65 | 1/11/68 | 34 | 25,29,62 | Home | Hearing impaired. No speech. |
| 31 | 11/15/42 | 7/26/67 | 38 | 09,12,12.2 39(deaf mute) | Cleary Oral Sch. for the Deaf. St. Mary's Sch for the Deaf. | Gross deafness, does not hear tuning fork. Some manual communication. |
| 32 | 6/9/58 | 9/26/69 | 53 | 311.40 | Public School | Impaired hearing and speech |
| 33 | 5/12/42 | 2/24/65 | 53 | Familial. 81,38 (hearing handicapped) | Private School Batavia Sch. for the Blind | Hearing aid. |
| 34 | 8/30/47 | 10/3/60 | 63 | 38 | Rome School for the Deaf. | Severe hearing loss. Manual Communication. |
| 35 | 1/8/64 | 2/28/68 | -20 | 10,11,11.9 68,22,38 | Home | Hearing handicapped, no speech. Appears deaf. |
| 36 | 4/27/61 | 10/25/66 | -20 | 61,68,33 | Home | Unable to talk. Otitis Media. |
| 37 | 1/16/60 | 3/8/65 | 55-65 | 32,68,33 | Home | Reads lips. Appears to have serious hearing loss |
| 38 | 12/4/40 | Feb./44 | 23 | Unknown | Home | Hearing questionable. Does not talk. |
| 39 | 11/24/53 | 6/25/64 | .52 | 61,61.x, 68 | Sunshine School | Cerebral Palsy, speech impaired. |
| 40 | 12/7/39 | 2/29/56 | 81 | Undifferen-tiated. Congenital-Deaf-Mutism | Rome School for the Deaf | Deaf mute - knows manual alphabet |
| 41 | 11/28/64 | 1/5/70 | -20 | 314.01 | Home | Poor vision and hearing. |

ROME STATE SCHOOL — F E M A L E S — EXHIBIT 6

| PATIENT CODE NUMBER | BIRTH-DATE | DATE OF ADMISSION | IQ | MEDICAL CLASSI-FICATION | SCHOOLING OR PROGRAM PRIOR TO ADMISSION | PERTINENT COMMENTS FROM FOLDERS AND PERSONAL OBSERVATION |
|---|---|---|---|---|---|---|
| 42 | 10/25/52 | 12/11/62 | 58 | 11,33,34.5 | St. Joseph's Infant Home. | Defective speech and hearing. Read lips. |
| 43 | 2/19/61 | 9/16/65 | 25 | 32,33,68 | Home | Severe hearing losss. |
| 44 | 2/12/49 | 4/26/61 | -20 | Familial | Home | Deaf. |
| 45 | 2/6/62 | 6/5/57 | -20 | 06,69,22, 68. | Home | Does not talk. |
| 46 | 10/13/64 | 7/27/65 | 42 | 01,64 | St. Margaret's House | Impaired speech and hearing. |
| 47 | 3/22/57 | 12/15/64 | 62 | 00,81 | St. Margaret's House. | Impaired hearing. Deafness |
| 48 | 4/7/55 | 11/4/64 | 20 | 25,89 | Syracuse Speech & Hearing Clinic. | No Speech. |
| 49 | 12/15/51 | 5/23/58 | 62 | Familial | Rome School for the Deaf | Deaf mute. Some manual communication |
| 50 | 4/13/62 | 8/31/66 | 49 | 00,81 | Foster Home | Defective speech. Sibling at Rome School for the Deaf. |
| 51 | 9/17/52 | 10/17/60 | 55 | 61,67:9,33 | Home | Deafness. Speech defect. Hearing Aid. |
| 52 | 8/26/58 | 5/1/67 | 50 | 78,33 | Public School | Hearing Aid. |
| 53 | 3/24/54 | 4/7/59 | 20 | Trauma during Birth. | Home | Unable to talk. Bilateral mastoid Tympanoplasty in 1970 |
| 54 | 10/16/53 | 9/20/66 | 41 | 24,78 | Refused Admit-tance at Rome Sch. for the Deaf. | Severe hearing impairment. Some manual communication. |
| 55 | 1/3/43 | 5/7/57 | 62 | Familial | Rome School for the Deaf. | Defective hearing. Otitis Media. On Family Care |

ROME STATE SCHOOL

EXHIBIT 6

| PATIENT CODE NUMBER | BIRTH-DATE | DATE OF ADMISSION | IQ | MEDICAL CLASSI-FICATION | SCHOOLING OR PROGRAM PRIOR TO ADMISSION | PERTINENT COMMENTS FROM FOLDERS AND PERSONAL OBSERVATION |
|---|---|---|---|---|---|---|
| 56 | 8/15/64 | 9/28/66 | 54 | 03,62,62.2 | St. Margaret's Home | |
| 57 | 5/23/53 | 5/7/64 | 74 | 89 | Percy Hughes Sch.,Syracuse | Severe hearing loss. No speech. Aphasia |
| 58 | 12/1/60 | 5/29/59 | 61 | 311.04 | Refused Admit-tance by Rome School for the Deaf. | Deaf mute. Hearing Aid. |
| 59 | 5/22/42 | 10/9/57 | 57 | Familial | Public School | Speech and hearing defects |
| 60 | 1/19/41 | 10/12/48 | 11 | Unknown | Public School | Totally deaf. |
| 61 | 5/2/48 | 1/3/62 | 52 | 81,33 | Public School | Bilateral deafness. Speech impair-ment. On Family Care. |
| 62 | 5/4/49 | 7/13/62 | 48 | 89 | Refused Admit-tance at Rome School for the Deaf | Hearing and speech impaired |
| 63 | 11/29/63 | 2/3/70 | -20 | 314.03 | Home | No speech. Severe hearing loss. |
| 64 | 12/28/42 | 7/21/48 | 42 | 312.81 389(deaf-ness) | Home | Deafness. On Family Care. |

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| PATIENT CODE NUMBER | BIRTH-DATE | DATE OF ADMISSION | IQ | MEDICAL CLASSI-FICATION | SCHOOLING OR PROGRAM PRIOR TO ADMISSION | PERTINENT COMMENTS FROM FOLDERS AND PERSONAL OBSERVATION |
|---|---|---|---|---|---|---|
| 1 | 3/2/54 | 3/13/59 | 25-35 | Birth Trauma | Home | |
| 2 | 10/3/44 | 2/4/66 | 72 | 81,36 | Batavia School | Blind, hearing handicapped. |
| 3 | 6/10/63 | 6/30/66 | 23 | 23 | Home | Does not talk |
| 4 | 12/9/62 | 3/12/68 | -20 | 11.2 | Home | Hearing loss |
| 5 | 4/19/47 | 5/20/52 | +20 | Not given | Home | Does not talk |
| 6 | 3/22/46 | 2/7/63 | 77 | 23,32,39, 44,47 | Rochester Sch. for the Deaf | Deaf mute |
| 7 | 12/4/57 | 12/11/63 | 20 | 33,69 | Home | Hearing handicapped, appears deaf. |
| 8 | 9/3/57 | 3/1/63 | 25 | 78 | Home | Hearing and speech defect. |
| 9 | 1/2/50 | 3/8/55 | 25 | Undiffer-entiated. | Home | Deaf mute. |
| 10 | 11/2/54 | 4/24/56 | 42 | Mongolism | Home | Hearing impaired. |
| 11 | 8/20/44 | 8/2/50 | 31 | Mongolism | Home | Limited speech. Can't hear. |
| 12 | 12/30/64 | 8/27/70 | 33 | Not given | Home | Hearing loss. |
| 13 | 10/15/64 | 10/26/66 | 20 | 11.2,68, 5,33 | Home | Hearing handicapped. Is deaf. |
| 14 | 2/11/51 | 5/21/55 | 29 | Birth Trauma | Home | Does not talk. |
| 15 | 11/4/64 | 6/3/66 | 47 | 62.5,4x | Home | No speech or hearing. |
| 16 | 4/17/66 | 1/6/69 | 34 | 313.49 | Tioga General Hospital | No speech. Hearing questioned. |
| 17 | 15 years | Not avail. | 23 | Not avail. | Not available | Not available. |

NEWARK STATE SCHOOL — MALES — EXHIBIT 7

| PATIENT CODE NUMBER | BIRTH-DATE | DATE OF ADMISSION | IQ | MEDICAL CLASSI-FICATION | SCHOOLING OR PROGRAM PRIOR TO ADMISSION | PERTINENT COMMENTS FROM FOLDERS AND PERSONAL OBSERVATION |
|---|---|---|---|---|---|---|
| 18 | 9/30/63 | 6/17/68 | 32 | 78 | Home | Is deaf. |
| 19 | 9/15/64 | 12/20/67 | -20 | 78 | Home | Cannot talk. No hearing. |
| 20 | 5/21/64 | 8/13/68 | 30 | 314.40 | Home | No speech. |
| 21 | 4/18/65 | 10/5/70 | 26 | Not yet Classified | County Hospi-tal. | Deafness. Does not speak. |
| 22 | 12/20/64 | 8/8/66 | -20 | 11.2 | Home | Is deaf. Blind. |
| 23 | 2/20/67 | 11/7/69 | -20 | 314.12 | Home | Does not talk. |
| 24 | 6/21/55 | 12/4/59 | 48 | Undiffer-entiated. | Home | Deaf. Manual communication. |
| 25 | 8/10/57 | 2/7/66 | 30 | 23 | Home | Hearing severely impaired. Does not talk. |
| 26 | 6/8/61 | 11/29/65 | 25 | 69 | Home | Deaf. Does not talk. |
| 27 | 1/15/51 | 4/11/55 | -20 | Congenital Cerebral Spastic | Home | Deaf |
| 28 | 6/7/43 | 10/24/51 | -20 | Unknown | Home | Deaf mute. |
| 29 | 7/3/41 | 10/27/50 | 38 | Heredity | Home | Deaf Mute. Reads lips. Sign Language. |
| 30 | 12/20/56 | 1/29/62 | 31 | 62.1 | Home | Hearing impaired. Non-verbal. |
| 31 | 10/10/57 | 2/19/65 | 40 | 64 | Rochester Day Care Center | Poor speech, hearing impairment. |
| 32 | 9/26/51 | 5/3/61 | 51 | 89 | Home | Hearing and speech severely impaired. |
| 33 | 5/7/54 | 5/15/59 | 34 | Undiffer-entiated. | Home | Doesn't talk. Hearing loss. |
| 34 | 9/6/58 | 8/26/63 | 24 | 79 | Home | Deaf, no speech. Has hearing aid. |

NEWARK STATE SCHOOL — MALES — EXHIBIT /

| PATIENT CODE NUMBER | BIRTH-DATE | DATE OF ADMISSION | IQ | MEDICAL CLASSI-FICATION | SCHOOLING OR PROGRAM PRIOR TO ADMISSION | PERTINENT COMMENTS FROM FOLDERS AND PERSONAL OBSERVATION |
|---|---|---|---|---|---|---|
| 35 | 8/2/55 | 12/3/68 | 81 | 310.12 | Rochester Public Schools | Cannot Speak. Hearing loss(?). |
| 36 | 10/25/57 | 5/6/64 | 30 | 78,31 | Home | Cannot talk. Hearing loss(?). |
| 37 | 4/15/55 | 2/23/65 | 48 | Undifferentiated. | Rochester St. Hospital | Hearing loss. Otitis Media. |
| 38 | 6/14/55 | 9/29/60 | 28 | 78 | Home | Does not talk. Hearing loss. |
| 39 | 7/30/58 | 11/5/62 | 40 | 89 | Home | Cannot hear or talk. |
| 40 | 11/17/44 | 8/25/50 | 30 | Congenital Cerebral Spastic Paraplegia | Home | Congenital deafness. Deaf mute. |
| 41 | 10/10/47 | 5/16/56 | Not avail. | Not available | Rochester Day Care Center | Profound Bilateral Sensori-Neural hearing loss. |
| 42 | 9/3/53 | 11/5/64 | 40 | 33,78 | Foster home. | Deaf mute. |
| 43 | 9/20/41 | 3/19/48 | 34 | Developmental. | Home | No speech. Possible hearing loss. |
| 44 | 2/19/57 | 5/10/62 | 32 | 11.2,38 | Home | Central hearing loss. |
| 45 | und. 16 | F O L D E R | | N O T | A V A I L A B L E. | |
| 46 | und. 16 | F O L D E R | | N O T | A V A I L A B L E. | |





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TABLE 1

CHARACTERISTICS OF SAMPLE POPULATION

| | Age and Sex | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | Total | | |
| | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages |
| Number | 50 | 56 | 106 | 33 | 30 | 63 | 83 | 86 | 169 |
| Mean Age | 17.28 | 30.34 | 24.18 | 16.22 | 28.68 | 22.15 | 16.86 | 29.76 | 23.42 |
| Standard Deviation | 2.89 | 4.94 | 7.67 | 2.74 | 4.44 | 7.23 | 2.87 | 4.82 | 7.56 |

TABLE 2

ACADEMIC ACHIEVEMENT (GRADE LEVEL) IN BASIC SUBJECT BY AGE AND SEX

| Subject | Age and Sex | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | Total | | |
| | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages |
| Arithmetic | | | | | | | | | |
| Number | 35 | 33 | 68 | 22 | 18 | 40 | 57 | 51 | 108 |
| Mean Grade Level | 2.2 | 1.6 | 1.9 | 1.4 | 2.4 | 1.9 | 1.9 | 1.9 | 1.9 |
| Standard Deviation | 1.5 | 1.4 | 1.5 | 1.1 | 1.6 | 1.4 | 1.4 | 1.5 | 1.5 |
| Reading | | | | | | | | | |
| Number | 32 | 32 | 64 | 22 | 18 | 40 | 54 | 50 | 104 |
| Mean Grade Level | 1.6 | 1.3 | 1.5 | 1.2 | 2.8 | 2.0 | 1.5 | 1.9 | 1.7 |
| Standard Deviation | 1.1 | 1.3 | 1.2 | 1.2 | 2.3 | 1.9 | 1.2 | 1.8 | 1.5 |
| Spelling | | | | | | | | | |
| Number | 31 | 32 | 63 | 21 | 18 | 39 | 52 | 50 | 102 |
| Mean Grade Level | 1.5 | 1.5 | 1.5 | 1.4 | 2.0 | 1.7 | 1.5 | 1.7 | 1.6 |
| Standard Deviation | .8 | 1.3 | 1.1 | .8 | 1.4 | 1.1 | .8 | 1.4 | 1.1 |

TABLE 3

RESULTS OF PHYSICAL EXAMINATION

| Number of Physical Disabilities* | Number | Percent |
|---|---|---|
| No apparent disability | 32 | 21.3 |
| One disability | 53 | 35.3 |
| Two disabilities | 40 | 26.7 |
| Three disabilities | 18 | 12.0 |
| Four disabilities | 4 | 2.7 |
| Five disabilities | 2 | 1.3 |
| Six disabilities | 1 | .7 |
| | 150 | 100.0 |

* In addition to presumed mental deficiency and deafness.

TABLE 4

SPEECH RECEPTION THRESHOLD (SRT) BY AGE AND SEX

| | Age and Sex | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | Total | | |
| | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages |
| Number* | 33 | 36 | 69 | 22 | 17 | 39 | 55 | 53 | 108 |
| Mean | 31.67 | 40.56 | 36.30 | 21.36 | 35.59 | 27.56 | 27.55 | 39.00 | 33.15 |
| Standard Deviation | 22.73 | 20.36 | 22.01 | 17.78 | 24.72 | 22.24 | 21.58 | 21.96 | 22.49 |

* No scores obtained on twenty patients.





TABLE 5

SPEECH DISCRIMINATION (SD) BY AGE AND SEX

| | Age and Sex | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | Total | | |
| | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages |
| Number* | 26 | 18 | 44 | 16 | 8 | 24 | 42 | 26 | 68 |
| Mean | 82.38 | 77.89 | 80.54 | 87.25 | 92.25 | 88.92 | 84.24 | 82.31 | 83.50 |
| Standard Deviation | 21.33 | 21.44 | 21.49 | 15.21 | 13.47 | 14.84 | 19.37 | 19.86 | 19.81 |

* No scores obtained on sixty patients.

TABLE 6

AUDIOLOGIST CLASSIFICATION OF HEARING LOSS BY AGE AND SEX

| Classification* | Age and Sex | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | Total | | | |
| | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages N | All ages % |
| I - Normal Limits (0-15 dB) | 11 | 6 | 17 | 13 | 7 | 20 | 24 | 13 | 37 | 28.91 |
| II - Mild Loss (20-40 dB) | 9 | 14 | 23 | 6 | 3 | 9 | 15 | 17 | 32 | 25.01 |
| III - Moderate Loss (45-60 dB) | 11 | 14 | 25 | 4 | 4 | 8 | 15 | 18 | 33 | 25.78 |
| IV - Severe Loss (65-80 dB) | 3 | 3 | 6 | 1 | 5 | 6 | 4 | 8 | 12 | 9.37 |
| V - Total Loss (85-100 dB) | 3 | 9 | 12 | 2 | 0 | 2 | 5 | 9 | 14 | 10.93 |
| Number | 37 | 46 | 83 | 26 | 19 | 45 | 63 | 65 | 128 | 100% |
| Mean | 2.41 | 2.89 | 2.68 | 1.96 | 2.37 | 2.13 | 2.22 | 2.74 | 2.48 | |
| Standard Deviation | 1.22 | 1.29 | 1.28 | 1.23 | 1.21 | 1.12 | 1.67 | 1.29 | 1.29 | |

* Decibel loss in multiples of five.



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TABLE 7

PERCENT OF SPEECH IMPAIRMENT BY AGE AND SEX (AMA GUIDE)

| Percent of Impairment* | Age and Sex | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | Total | | | |
| | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages N | % |
| I - 0-10% | 15 | 9 | 24 | 4 | 9 | 13 | 19 | 18 | 37 | 28.90 |
| II - 15-35% | 8 | 4 | 12 | 3 | 1 | 4 | 11 | 5 | 16 | 12.50 |
| III - 40-60% | 4 | 3 | 7 | 12 | 1 | 13 | 16 | 4 | 20 | 15.63 |
| IV - 60-85% | 3 | 12 | 15 | 2 | 3 | 5 | 5 | 15 | 20 | 15.63 |
| V - 90-100% | 7 | 18 | 25 | 5 | 5 | 10 | 12 | 23 | 35 | 27.34 |
| Number | 37 | 46 | 83 | 26 | 19 | 45 | 63 | 65 | 128 | 100% |
| Mean Class | 2.43 | 3.57 | 3.06 | 3.04 | 2.68 | 2.89 | 2.68 | 3.32 | 3.00 | |
| Standard Deviation | 1.54 | 1.52 | 1.64 | 2.09 | 1.75 | 1.49 | 1.16 | 1.65 | 1.58 | |

* In multiples of five.

TABLE 8

AUDIOLOGIST JUDGMENT OF TOTAL SPEECH AND HEARING IMPAIRMENT BY AGE AND SEX (AMA GUIDE)*

| Classification of Impairment | Age and Sex | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | Total | | | |
| | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages N | All ages % |
| I - None (0-10%) | 12 | 4 | 16 | 4 | 5 | 9 | 16 | 9 | 25 | 19.53 |
| II - Mild (11-23%) | 7 | 7 | 14 | 3 | 6 | 9 | 10 | 13 | 23 | 17.97 |
| III - Moderate (24-35%) | 5 | 4 | 9 | 2 | 5 | 7 | 7 | 9 | 16 | 12.50 |
| IV - Severe (36-47%) | 4 | 12 | 16 | 5 | 6 | 11 | 9 | 18 | 27 | 21.09 |
| V - Critical (48-58%) | 9 | 19 | 28 | 5 | 4 | 9 | 14 | 23 | 37 | 28.91 |
| Number | 37 | 46 | 83 | 19 | 26 | 45 | 56 | 72 | 128 | 100% |
| Mean | 2.76 | 3.76 | 3.31 | 3.21 | 2.92 | 3.04 | 2.91 | 3.46 | 3.22 | |
| Standard Deviation | 1.58 | 1.36 | 1.55 | 1.46 | 1.36 | 1.43 | 1.58 | 1.41 | 1.53 | |

* As related to the whole man.

TABLE 9

MEAN INTELLIGENCE TEST SCORES BY AGE AND SEX

| Name of Test | Age and Sex | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | Total | | |
| | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages |
| Wechsler (WISC-WAIS) | | | | | | | | | |
| Performance Scale | | | | | | | | | |
| Number | 32 | 36 | 68 | 24 | 16 | 40 | 56 | 52 | 108 |
| IQ Mean | 61.50 | 60.89 | 61.66 | 58.42 | 63.50 | 60.45 | 60.18 | 62.33 | 61.21 |
| Standard Deviation | 28.45 | 16.41 | 22.88 | 17.00 | 13.09 | 15.75 | 24.26 | 15.48 | 20.54 |
| Verbal Scale | | | | | | | | | |
| Number | 26 | 17 | 43 | 15 | 14 | 29 | 41 | 31 | 72 |
| IQ Mean | 59.69 | 59.41 | 59.58 | 53.73 | 57.50 | 55.55 | 57.51 | 58.55 | 57.96 |
| Standard Deviation | 10.71 | 20.63 | 15.42 | 7.16 | 8.88 | 8.25 | 9.99 | 16.43 | 13.17 |
| Full Scale | | | | | | | | | |
| Number | 25 | 16 | 41 | 14 | 13 | 27 | 39 | 29 | 68 |
| IQ Mean | 62.52 | 59.81 | 61.46 | 53.29 | 58.00 | 55.55 | 59.21 | 59.00 | 59.11 |
| Standard Deviation | 11.27 | 5.90 | 9.63 | 9.32 | 10.28 | 10.06 | 11.50 | 8.19 | 10.22 |
| Modified Goodenough Draw-A-Person Test | | | | | | | | | |
| Number | 41 | 46 | 87 | 24 | 22 | 46 | 65 | 68 | 133 |
| IQ Mean | 59.80 | 62.07 | 61.00 | 56.67 | 61.27 | 58.87 | 58.65 | 61.81 | 60.26 |
| Standard Deviation | 16.40 | 21.16 | 19.10 | 15.44 | 16.47 | 16.11 | 16.12 | 19.77 | 18.15 |
| Bender-Gestalt, Rev. | | | | | | | | | |
| Number | 41 | 49 | 90 | 29 | 23 | 52 | 70 | 72 | 142 |
| IQ Mean | 74.56 | 72.00 | 73.17 | 64.21 | 73.04 | 68.12 | 70.27 | 72.33 | 71.32 |
| Standard Deviation | 16.86 | 22.44 | 20.14 | 21.16 | 18.83 | 20.63 | 19.96 | 21.36 | 20.47 |

TABLE 10

MEDIAN SCORES OF MEASURES OF INTELLIGENCE BY AGE AND SEX

| Measure | Age and Sex | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Males | | | Females | | | Total | | |
| | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages | Under 22 years | 22 years and over | All ages |
| Wechsler (WISC-WAIS) | | | | | | | | | |
| Performance Scale | | | | | | | | | |
| Number* | 50 | 56 | 106 | 33 | 30 | 63 | 83 | 86 | 169 |
| Median | 62 | 40 | 50 | 44 | 44 | 44 | 51 | 42 | 46 |
| Verbal Scale | | | | | | | | | |
| Number* | 50 | 56 | 106 | 33 | 30 | 63 | 83 | 86 | 169 |
| Median | 45 | 43 | 43 | 44 | 47 | 44 | 44 | 43 | 43 |
| Full Scale | | | | | | | | | |
| Number* | 50 | 56 | 106 | 33 | 30 | 63 | 83 | 86 | 169 |
| Median | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |
| Modified Goodenough | | | | | | | | | |
| Number* | 50 | 56 | 106 | 33 | 30 | 63 | 83 | 86 | 169 |
| Median | 53 | 50 | 50 | 49 | 50 | 50 | 52 | 50 | 50 |
| Bender-Gestalt, Rev. | | | | | | | | | |
| Number | 50 | 56 | 106 | 33 | 30 | 63 | 83 | 86 | 169 |
| Median | 74 | 75 | 72 | 60 | 75 | 72 | 72 | 75 | 72 |

* Patients for whom no scores were obtained were included at the lowest score in the obtained group.

TABLE 11

CORRELATIONS BETWEEN WECHSLER PERFORMANCE IQ AND OTHER DIAGNOSTIC MEASUREMENTS*

| Measurement | Correlation with Wechsler |
|---|---|
| Achievement | |
| Arithmetic | r .57 |
| Reading | r .38 |
| Personality | |
| General adjustment | ϕ .26** |
| Behavioral disorganization | ϕ .40** |
| Chronic maladjustment | ϕ .25 |
| Depression | ϕ .24 |
| Nineteen Factor | r .55** |

* Only correlations significant at $P < .05$ are given.
** Scores converted in direction from that shown in exhibits.

TABLE 12

CORRELATIONS BETWEEN SPEECH AND HEARING TESTS AND OTHER DIAGNOSTIC MEASUREMENTS

| Speech and Hearing Test | Other Diagnostic Measures* | | | |
|---|---|---|---|---|
| | Wechsler Performance IQ | Examiner's Estimate of IQ | Reading Achievement | Arithmetic Achievement |
| Audiologist's Classification of Impairment | <u>.31</u> | <u>.65</u> | .03 | <u>.32</u> |
| Impairment of Total Man | .01 | <u>-.36</u> | <u>-.32</u> | <u>-.20</u> |
| Speech Reception Threshold | <u>.26</u> | <u>.23</u> | .10 | <u>.24</u> |
| Pure-Tone (Air) | -.14 | .16 | -.01 | .10 |

* Underlined correlations are significant at $P < .05$.

TABLE 13

COMPARISON OF RESULTS ON DATA BANK MEASURES BY VOCATIONAL PLACEMENT

| Tests | Vocational Placement | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sheltered Workshop | | | Institution | | | Community | | |
| | Number | Mean | Standard Deviation | Number | Mean | Standard Deviation | Number | Mean | Standard Deviation |
| Intellectual Function | | | | | | | | | |
| Wechsler Performance | | | | | | | | | |
| IQ | 15 | 68.9 | 13.0 | 3 | 75.7 | 2.5 | 5 | 77.8 | 11.3 |
| Object assembly | 15 | 8.1 | 2.7 | 4 | 8.0 | 1.2 | 6 | 8.5 | 3.8 |
| Block design | 15 | 6.7 | 2.9 | 4 | 6.3 | 1.5 | 6 | 6.8 | 2.9 |
| Picture arrangement | 15 | 3.3 | 2.9 | 3 | 5.0 | .8 | 5 | 4.8 | 2.3 |
| Picture comprehension | 14 | 5.0 | 2.9 | 4 | 3.8 | 2.5 | 4 | 5.8 | 2.8 |
| Digit symbol | 14 | 2.9 | 2.4 | 4 | 5.0 | 2.9 | 6 | 4.0 | 3.0 |
| Chicago Non-Verbal | 16 | 53.9 | 28.3 | 4 | 66.7 | 26.3 | 6 | 70.3 | 21.6 |
| Raven Progressive Matrices | 16 | 24.2 | 5.8 | 4 | 26.5 | 3.8 | 6 | 24.2 | 5.2 |
| Vocational Aptitude | | | | | | | | | |
| Crawford Dexterity | | | | | | | | | |
| Part I (in minutes) | 14 | 9.98 | 3.20 | 4 | 7.81 | 1.72 | 6 | 10.22 | 6.74 |
| Part II | 14 | 11.35 | 2.97 | 4 | 11.27 | 3.17 | 6 | 12.54 | 5.37 |
| Minnesota Manipulation | | | | | | | | | |
| Placing (in seconds) | 13 | 183.5 | 62.5 | 4 | 169.3 | 67.0 | 5 | 148.4 | 42.3 |
| Turning | 13 | 175.2 | 70.6 | 4 | 169.7 | 50.7 | 5 | 140.4 | 50.1 |
| Displacing | 13 | 138.5 | 36.9 | 4 | 121.3 | 39.4 | 5 | 121.8 | 39.2 |
| One-hand turning and placing | 13 | 217.3 | 61.7 | 4 | 184.5 | 16.6 | 5 | 186.6 | 51.8 |
| Two-hand turning and placing | 13 | 140.6 | 52.0 | 4 | 158.5 | 50.1 | 5 | 117.2 | 43.7 |
| Minnesota Spatial Relations | 13 | 1520.3 | 461.4 | 4 | 1640.3 | 636.5 | 5 | 1492.2 | 623.4 |
| Pennsylvania Bi-Manual | | | | | | | | | |
| Part A (in seconds) | 13 | 843.8 | 236.8 | 4 | 836.0 | 121.8 | 4 | 639.3 | 142.3 |
| Part D | 13 | 430.3 | 116.4 | 4 | 356.8 | 44.8 | 4 | 309.5 | 119.0 |
| Bennett Hand-Tool Dexterity Test (in min.) | 13 | 13.38 | 3.68 | 4 | 13.78 | 1.11 | 3 | 15.16 | 3.29 |
| Motor Function | | | | | | | | | |
| Lincoln-Oseretsky Motor Development | 7 | 64.7 | 16.1 | 3 | 57.3 | 3.3 | 4 | 70.8 | 9.8 |

TABLE 14

Rome State School

| | | |
|---|---|---|
| Population of Rome State School | | 3,774 |
| Number of Trainable and Educable residents, ages 6-30 (estimate) | | |
| | Male: | 626 |
| | Female: | 324 |
| | Total: | 950 |
| Number of Trainable and Educable residents with hearing losses, all ages (administration estimate) | | |
| | Male: | 98 |
| | Female: | 58 |
| | Total: | 156 |
| Number of Trainable and Educable residents ages 6-30 with functional hearing losses as defined by this study. | | |
| | Male: | 41 |
| | Female: | 23 |
| | Total: | 64 |
| Percentage of Trainable and Educable residents ages 6-30 with functional hearing losses to total T and E resident group, ages 6-30. | | |
| | Male: | 7% |
| | Female: | 7% |
| | Both: | 7% |

Table 14 - continued

IQ Range of hearing impaired
T and E residents, ages 6-30.

| | |
|---|---|
| Low: | -20 |
| High: | 85 |

TABLE 15

Newark State School

| | | |
|---|---|---|
| Population of Newark State School | | 2,326 |
| Number of Trainable and Educable residents, ages 6-30 (estimate) | 626 | |
| Number of Trainable and Educable residents, ages 6-30 with functional hearing losses as defined by this study. | | |
| Male: | 29 | |
| Female: | 17 | |
| Total: | 46 | |
| Percentage of Trainable and Educable residents, ages 6-30 with functional hearing losses to total T and E resident group, ages 6-30 (no sex breakdown) | | |
| Total: | 7% | |
| IQ range of hearing impaired T and E residents, ages 6-30. | | |
| Low: | -20 | |
| High: | 81 | |

TABLE 16

New York State Department of
Mental Hygiene, Resident
Survey, State Schools

June, 1969

Number of State Schools: 15

Total Number of Residents:

| | |
|---|---|
| Male: | 14,255 |
| Female: | 11,510 |
| Total: | 25,765 |

Number of Residents, as determined by the Survey, who:

| | No. | % |
|---|---|---|
| Are hard-of-hearing: | 1,419 | 5.5 |
| Are totally deaf: | 412 | 1.6 |
| Combined: | 1,831 | 7.1 |

Table 17

Patients With and Without Hearing Handicap
by Degree of Handicap by Hospital (with percentages)
Maryland State Hospitals for the Retarded
1968

| Degree of Handicap | Both Hospitals No. | Both Hospitals Percent | Rosewood No. | Rosewood Percent | Henryton No. | Henryton Percent |
|---|---|---|---|---|---|---|
| ALL PATIENTS | 3181 | 100.0 | 2810 | 100.0 | 371 | 100.0 |
| No handicap, hearing apparently normal | 2720 | 85.5 | 2393 | 85.2 | 327 | 88.1 |
| Total with handicap or handicapping condition, all degrees | 461 | 14.5 | 417 | 14.8 | 44 | 11.9 |
| Some hearing problem, mild | 174 | 5.4 | 136 | 4.8 | 38 | 10.2 |
| Severe hearing problem | 17 | 0.5 | 16 | 0.6 | 1 | 0.3 |
| Some problem, degree not determined | 113 | 3.6 | 110 | 3.9 | 3 | 0.8 |
| Apparently totally deaf | 44 | 1.4 | 43 | 1.5 | 1 | 0.3 |
| Hearing cannot be determined | 113 | 3.6 | 112 | 4.0 | 1 | 0.3 |

Table 18

Approximation of Degree of Hearing Loss
of the Hospitalized Hearing Impaired Retarded
Population of Maryland
N = 461

| Estimated Degree of Hearing Loss | Prevalance Number | Prevalance Precent |
|---|---|---|
| Deaf | 32 | 6.9 |
| Severe Hearing Problem (Cannot understand speech) | 43 | 9.3 |
| Observable or Measureable hearing loss, but not Severe | 118 | 23.6 |
| Hearing Loss Established but Degree Unknown | 268 | 58.1 |